



**Barrick Gold Corporation**  
BCE Place, Canada Trust Tower  
Suite 3700, 161 Bay Street  
Toronto, Canada  
M5J 2S1  
Tel. (416) 861-9911  
Fax (416) 861-0727

# SPEECH

## PDAC 2003 International Convention

Given By: Alex Davidson

Senior Vice-President, Exploration

Date: March 10, 2003

Good morning ladies and gentlemen. I'd like to thank the PDAC for inviting me to speak today. As a geologist, I have spent a lot of my time in the field assessing the lay of the land on exploration properties. Today, my subject is broader - the lay of the land of the exploration business.

Specifically, I have been asked to speak about how consolidation in mining is impacting exploration. I think we'd all agree that you don't need hyperspectral imaging, or the latest in magnetotellurics to conclude that the impact has been substantial. The last half decade or so has been one of the harshest stretches for exploration that I've seen in 30 years' experience. The main culprits are obvious: low metal prices across the board -- whether in gold, copper, nickel or other metals -- and the flight of speculative capital along with investor confidence.

But these alone don't account for all the changes we've been through. Consolidation is also impacting the picture, both in combination with low prices and apart from them. These factors have contributed to a decline in exploration spending that promises to have continued effect on production supply going forward.

Let me start with an overview of consolidation and the forces driving it, how it's reshaping the industry, and then assess its impact on exploration. As we'll see, while low metal prices may have helped start the consolidation wave, rising prices don't mean an end to consolidation, or its effects on exploration.

While my observations can be applied to the mining industry in general, my examples will be mainly drawn from the gold industry, which I know best.

This wave of consolidation started in 2000, and it started mainly with the base metal companies: Billiton bought Rio Algom, Phelps Dodge bought Cyprus Amax, Grupo Mexico got Asarco and Rio Tinto got North.

The wave picked up momentum through 2001 with the BHP Billiton merger and then the gold companies picked up on the trend. Since mid-2001 there have been over 14 company mergers/acquisitions and over 10 mine transactions in the precious metals industry.

What are the forces driving the consolidation wave in the first place -- and will they continue? First, consolidation has been driven by investor demands for scale. Getting on the radar screens of the investment community -- the big fund managers, the analysts - is what it's all about. Investors are demanding large, profitable companies with continual growth. How big is big enough -- \$8 billion in market cap, \$20 billion? The market cap of the entire gold industry - around \$55 billion - is only about 21% of Microsoft's \$255 billion market cap. The total market cap of the four largest diversified miners is only about \$80 billion.

Secondly, consolidation has been driven by investor demands for improving rates of return from existing assets, rather than exploring for and developing new ones. Low prices brought a focus on reducing operating costs, improving margins, and in general operating smarter, cheaper and more productively. This focus on achieving synergies through consolidation isn't likely to diminish, because the pressure remains on miners to achieve rates of return that are competitive with other sectors.

Thirdly, consolidation is driven by companies seeking to replace or increase production without the inherent risks in time and money of exploring for and developing new assets. The flight of speculative capital resulted in significantly decreased exploration activity by the juniors, who were part of the lifeblood of the exploration industry and who are significant contributors feeding the exploration pipeline.

There have been just 2 significant gold discoveries over the past three years, forcing companies to merge to show production and reserve growth. The result is a reshaped gold mining industry with fewer companies -- and a widening of the gap between the major and small companies.

From a select group of 40 gold mining companies in 1998, there were 14 intermediate producers controlling 24% of the production and 20% of the market cap. By 2002, the group of 40 had been reduced to a group of 22 through consolidation, and there were only 6 intermediate producers controlling 10% of the production and 11% of the market cap.

In contrast, in 1998 the top 8 gold producers in the group controlled 66% of the production and 65% of the market cap. In 2002, 9 senior gold producers controlled 86% of the production and 80% of the market cap - so we saw a decrease in intermediate share and an increase in the seniors' share.

So economies of scale, the need to improve rates of return and the need to increase production are all causes of consolidation. The net effect of consolidation on the industry is potentially positive in so far as it makes the industry better qualified to compete for investor capital. But that's not the whole picture. Let's take a look at the impact of consolidation on exploration.

## First - Exploration Expenditures

We're seeing fewer players at the top, who are now spending a larger percentage of shrinking global exploration expenditures. Take gold mining, for example. As you can see from this chart, back in 1997, the three largest gold companies, Barrick, Newmont and AngloGold, accounted for 8%, or \$267 million, of total exploration spending of \$3.3 billion. By 2001, the big three accounted for 21%, or \$185 million, of a smaller pie of \$900 million. What's equally striking here is the decline in gold exploration spending from about \$3.3 billion to around \$900 million over the five-year period. We see a similar decline for the broader industry.

The Minerals Economic Group (MEG) has reported that exploration budgets for 2002 stood at about \$1.9 billion, a drop of 14% from 2001. That followed a decline of 15% in 2001 and 7% in 2000. In total, exploration budgets have slid 63% since their peak of \$5.2 billion in 1997.

Without a doubt, low metal prices have been mainly responsible for the shrinking exploration expenditures in the gold industry, as elsewhere. Lest we forget the grisly details, nickel hit a low of \$1.69 per pound in 1998; copper dipped to 61 cents a pound in March 1999; and gold hit the \$250 an ounce level in mid-1999.

In addition, the lack of risk capital due to the lack of investor confidence in the speculative side of the market, and the Asian crisis followed by low prices resulted in decreased exploration spending by the junior companies. But consolidation has played a role in the exploration spending cutbacks as well. MEG reports that the mining industry lost eight significant mining and exploration companies to consolidation -- in 2001 alone. With them, a combined exploration budget of about US\$166 million disappeared. We can see the same trend by looking at three of the largest mergers in mining in recent years.

- In 2000, before their merger, Newmont and Normandy had combined exploration budgets of \$111 million. In 2002, post-merger, the total budget was \$73 million.
- Pre-merger, BHP and Billiton, had a combined exploration budget of over \$200 million. Post-merger, it was down to \$136 million.
- Pre-merger, Barrick and Homestake had a combined spending of \$149 million. Post-merger, the budget was \$104 million.

We in exploration at Barrick were lucky. Largely because of our hedging program, our income and our exploration budgets stayed pretty constant. In fact, we stepped up exploration spending as activity by juniors fell off. That decision bore fruit with the discovery of Alto Chicama last year, which in turn is leading to more spending to determine the size of Alto and to look for more.

And Alto is looking good. From an initial indicated resource of 3.5 million ounces announced last April, further infill drilling has produced a proven and probable oxide reserve of 110 million tonnes at an average grade of 1.9 grams per tonne, for a mineable reserve of 6.5 million ounces.

So Barrick has been bucking the trend of spending cutbacks with an aggressive exploration program, which is one of the most expansive in the industry. With a \$100 million exploration and business development budgeted for 2003, we're looking for more Alto's to come.

Consolidation also impacts exploration strategies. For seniors, finding larger, five-million-ounce-plus deposits becomes the focus. Some companies have nearly doubled their production through consolidation, which has also doubled the ounces required to replace production, not to mention adding to reserves.

In my early years in this business, one million ounce deposits filled the bill quite nicely back at head office, but today new finds must be both large enough to make a difference and offer rates of return that well exceed the cost of capital. And there have not been many 5 million ounce plus deposits lately.

You can see the trend on this chart. Since 1999, we've only seen two large gold discoveries: Goldcorp's Red Lake deposit which grew to over 5 million ounces and Barrick's grassroots discovery at Alto Chicama in 2001. Two in four years for the whole industry. By comparison, there were ten between 1994 and 1998.

Another effect on exploration to consider is the upheaval consolidation causes in terms of job losses and career moves in exploration. Job redundancy or downsizing is an unavoidable part of the process. Fewer companies translates into fewer jobs. Newmont for example, closed five exploration offices following the Battle Mountain merger. . Barrick closed three exploration offices following our merger with Homestake. Some people find themselves out of work, others work on contract, or even leave the industry.

Consolidation in the mining industry also has a ripple effect on the investment industry. Consolidation means fewer companies -- and fewer companies means that there has been a similar consolidation underway in the investment industry. This has affected both the buy side and the sell side of the street following mining stocks. There are fewer analysts paying less attention to fewer stocks.

Add to that the near drying up of financing in the industry. As you can see from this chart, mining companies haven't exactly been flush with cash from new financings for exploration -- or any other purpose. You can see the dramatic drop from a high of about \$5 billion in 1996 to the \$300 million range in 2000, before things started to turn around last year. Things are looking up now due to

higher metal prices. However, it takes time to find a deposit and with the lack of exploration spending across the board there will be a lag in new discoveries.

Consolidation also leads to declining R&D spending in exploration. For example, in Australia, R&D funding dipped by 60% over three years, according to a 2001 report by the Australian Institute of Geoscientists. Anecdotal evidence suggests the trend is continuing.

For example, Camiro lost four major companies from its sponsorship list between the Phase I and Phase III parts of one of its geochemistry studies due to mergers. Two other research organizations, MIRA and AMIRA, have announced their intention to merge, with one of the reasons being to lessen the competition for industry sponsorship. Quite simply, there are progressively fewer companies to sponsor research projects in exploration or any other field. This comes with a cost. Less spending on R&D means fewer innovations and fewer improvements to the economics, or success-rate, of exploration.

Now, I'd be hard-pressed to think of a technological breakthrough that has transformed the economics of exploration the way heap leaching, or autoclaving transformed processing costs, but there have been some significant advances in exploration research labs as well.

To give you just two examples from Barrick's experience with successful research funding:

- We helped fund research by Quantec to develop the Titan system for minesite exploration. It allows deeper penetration and the ability to map units at depth. We've used it successfully over our Goldstrike, Dee and Rossi properties in Nevada.
- Another example. We provided research funding for hyperspectral imaging. We used to use LANDSAT, which would tell us an alteration anomaly was there - But not more than that. Hyperspectral can map the different alteration minerals associated with gold deposits in some terrains.

Other companies could add their lists of innovations to this list. I would argue that, for our industry, the cost of not funding new research far outweighs the short-term savings. And besides, with most of the low-hanging fruit already picked in exploration, new technological advances will prove crucial to improving our success rate.

Most of the impacts of consolidation on exploration I have been discussing have been generally negative for exploration. However, there are some opportunities arising from consolidation that can have a positive impact on exploration.

For the acquiring company, takeovers not only add production without long development time, but they can also bring benefits in the form of synergies and new opportunities...

- By providing larger contiguous land packages (Barrick's consolidation of the Veladero Property; Newmont's acquisition of Santa Fe for its Nevada land package; and the Hope Bay/Miramar transaction come to mind); and,
- By providing entire new areas of exploration activity in desirable locales. The Homestake merger brought Barrick into Australia, where we're doing more greenfields and less brownfields, as well as applying our Carlin and Greenstone experience.
- In addition, there may be spin-off opportunities for other companies to acquire or joint venture exploration or mine properties that the new merged company does not consider strategic.
- The increased market cap resulting from the merger of smaller companies attracts more industry attention and could provide better access to funding for exploration.
- The question is: will the consolidation trend continue?

The short answer is yes.

Apart from historically low prices, the same forces that sparked consolidation in the first place are likely to remain unabated. In fact, for the gold industry, the falloff in exploration over recent years has led to a shortage of new discoveries that could result in declines in industry production over the next 10 years -- even at \$325 gold or better, according to research by the Beacon Group.

This expected falloff in production comes at a time when rising gold prices are likely to focus investor interest on companies with the best prospects for production growth. This, in turn, will increase the heat on companies lacking good organic growth prospects to hit the acquisition trail.

Consolidation is also likely to continue at the level of individual assets, with companies swapping or reshuffling contiguous assets, or joint venture properties amongst themselves in order to maximize returns.

Where will all this activity be centered -- among the majors, the mid-caps or the juniors? I think that a good deal of the urge to merge will be played out in a mid-cap tier of companies seeking to get on the big fund radar screens, and among juniors --- for example, through mergers to unite a cash-rich junior with a project-rich junior.

Where does Barrick fit in this scenario? We're well-positioned -- to grow organically, or through acquisitions and joint ventures with juniors. We have a four-mine, five year development plan in place that will contribute 2 million new ounces a year, at an average cost per ounce of just \$125 an ounce, with the initial project commencing in 2005.

Overall, it's the most expansive exploration and development program in our industry.

Barrick will also be actively increasing its association with the junior companies. As always, juniors are likely to have larger suitors like Barrick on their doorstep the moment they have an attractive

discovery with upside potential. Barrick's acquisition of Arequipa, which led to our development of the Pierina Mine in Peru comes to mind.

Overall, consolidation has been a relentless force, driven by investor demands and the competition for capital, that has combined with low prices to pare exploration budgets, R&D spending and jobs. In other ways it has introduced new opportunities for exploration departments in the form of synergies and expanded horizons.

But there is far more at stake here than short-term pain or gain for exploration departments and geologists. The long-term cost to the industry of the disappearance of exploration dollars is more sobering. One thing is certain: the current state of affairs in exploration spending is untenable for the health of the industry.

Big companies need to spend more on exploration -- or else at current annual production rates reserves will be depleted in 10 years. Given that most projects require on average 5 to 8 years from discovery to production, we are not currently funding exploration at a level required to replace reserves. We also need to attract more speculative capital back into the industry to invest in junior exploration companies who historically have provided a pipeline of new projects.

Fortunately, positive supply-demand fundamentals in the gold market bode well for the gold price. We need gold at \$350 and even higher, for 5 to 6 years, to put the economics in place to sustain exploration that will bring us the best discoveries - the low-cost, long-life properties that sustain the industry.

So I'd like to wrap-up with some words of encouragement to all the members of my audience today who are involved in the exploration business - whether you're geologists, entrepreneurs, or solo prospectors. You may have felt neglected as money dried up over the last few years. But you're going to be needed more than ever to keep our industry healthy in the years ahead.

Thank you.

Certain statements included herein, including those regarding, production and costs constitute "forward looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995. Such forward looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of Barrick or of the gold mining industry to be materially different from future results, performance or achievements expressed or implied by those forward looking statements. These risks, uncertainties and other factors include, but are not limited to, changes in the worldwide price of gold or certain other commodities and currencies and the risks involved in the exploration, development and mining business. These factors are discussed in greater detail in Barrick's most recent Form 40-F/Annual Information Form and Management's Discussion and Analysis of Financial and Operating Results" on file with the U.S. Securities and Exchange Commission and Canadian provincial securities regulatory authorities.

Barrick expressly disclaims any intention or obligation to update or revise any forward looking statements whether as a result of new information, events or otherwise.