

Economic Overview of the Nevada Mining Industry 2004

Exploration: The Key to Nevada's Mining Future



Photo credit: Adella Harding, Elko Daily Free Press

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Executive Summary

Nevada's minerals industry had an outstanding 2004 and first half of 2005, primarily because of higher commodity prices for gold, silver and copper. These price increases have stimulated expansion and exploration projects across the northern half of the state. The average gold price in 2004 was \$410 versus \$363 in 2003 and \$310 in 2002, and substantially above the levels of the late 1990's when \$270 gold prices led to mine closures and layoffs.

While the industry generally has excellent prospects looking forward, the past year saw the fourth consecutive year of declining gold production. 2004 gold production fell to 6.94 million ounces from 7.32 in 2003. Silver production, on the other hand, increased slightly from 10.2 million in 2003 to 10.3 million ounces in 2004. Gold, however, is by far and away the most economically significant mineral produced in the state with the value of 2004 production at \$2.8 billion out of \$3.3 billion for all minerals (excluding oil and geothermal). Gross proceeds of Nevada's gold mines increased in 2004 in spite of the decline in production because of price increases.

With this level of gold production, Nevada remains the world's third largest producer behind South Africa (11.1 million ounces) and Australia (7.8 million ounces). The world's fourth largest producer, China, is very close to Nevada at 6.8 million ounces. 2004 Nevada production accounted for 8.7 percent of total world mine output.

As in past few years, declining gold production is largely attributed to declining ore grades at some of the State's older and larger operations. These declines should be at least partially off set in 2005 and 2006, however, as new projects and expansions that are currently in development come into production.

Perhaps the most serious problem facing the industry at this point is rising production costs. 2004 total cash production costs, which do not include non-cash items like depreciation, increased to \$250 per ounce from \$215 in 2003, a 16.0 percent increase. Similarly, total production costs, which include all costs attributable to production, increased to \$304 per ounce from \$277 in 2003, a 9.6 percent increase. Much of these increases have been due to rising energy costs, both for electricity and diesel fuel.

Partly as a result of these rising costs and declining output in 2004, Net Proceeds of Minerals taxes paid increased only slightly over 2003, from \$38.8 million in 2003 to \$39.6 million, or 2.0 percent, in spite of the 13 percent increase in price. Simply put, the increase in price was off set by the reduction in output and increase in costs. In addition, in some cases increases in near mine exploration and development expenditures spurred by rising prices have increased Net Proceeds deductions. In the short term these exploration and development expenditures decrease tax revenues, but in the long term they can lead to increased production and tax revenues.

Other taxes paid by the minerals industry include ad valorem property taxes, the Modified Business Tax, and sales and use taxes. In 2004 total taxes remained at about the same levels as in 2003, increasing about 1.0 percent to approximately \$102.4 million. The majority of these government revenues accrued to local governments where mining activity occurs. It is also expected that sales and use taxes paid on purchases of construction materials and equipment and ad valorem property taxes paid to local governments will increase in the next few years.

As in previous years, another area of concern is the length of time required to get permits to explore for minerals and develop new projects. The industry has worked with State and federal regulators and the public to streamline the process while protecting Nevada's environmental resources.

The most encouraging signs of recovery in the State's minerals industry from the doldrums of the late 1990's are on the exploration side of the business and in the development of new mineral deposits. According to Nevada's Division of Minerals' Exploration Survey, 2004 exploration spending increased by 15 percent over 2003 to \$79.7 million and is projected to increase another 40.4 percent in 2005 to \$111.9 million. This exploration activity is primarily focused in Humboldt, Lander and Eureka counties, but other counties are impacted as well. In 2004 exploration activity at existing operations managed to increase statewide proven and probably gold reserves from 77.3 million ounces to 80.3 million ounces. When production of 6.9 million ounces in 2004 is considered this means that these operations added about 9 million ounces to their reserve base during the year. 80.3 million ounces of reserves are sufficient to maintain production at current levels for 12 years, and these estimates have historically proven to be underestimates.

Another encouraging sign of recovery has been the 33.1 percent surge in employment and the 9.4 percent increase in payrolls in 2004 over 2003. While encouraging, this development has presented operators with serious challenges in maintaining their workforces and getting trained workers. While this has been a problem, it is a good problem to have.

Other significant developments in 2004 and the first half of 2005:

- Barrick Gold has announced that it has extended the projected mine life of its Goldstrike operations from 2008 to at least 2014.
- Barrick Gold has begun construction of a \$100 million 115-megawatt power plant at Tracy in Storey County.
- Glamis Gold and Barrick Gold have begun their Millennium Expansion project at the Marigold Mine in Humboldt County that will approximately triple the mine's production.
- Newmont is in the permitting phase to construct a 200 MW electrical generating plant in Eureka County near Dunphy at an estimated cost of \$390 to \$420 million to serve its operations on the Carlin and Valmy Trends in

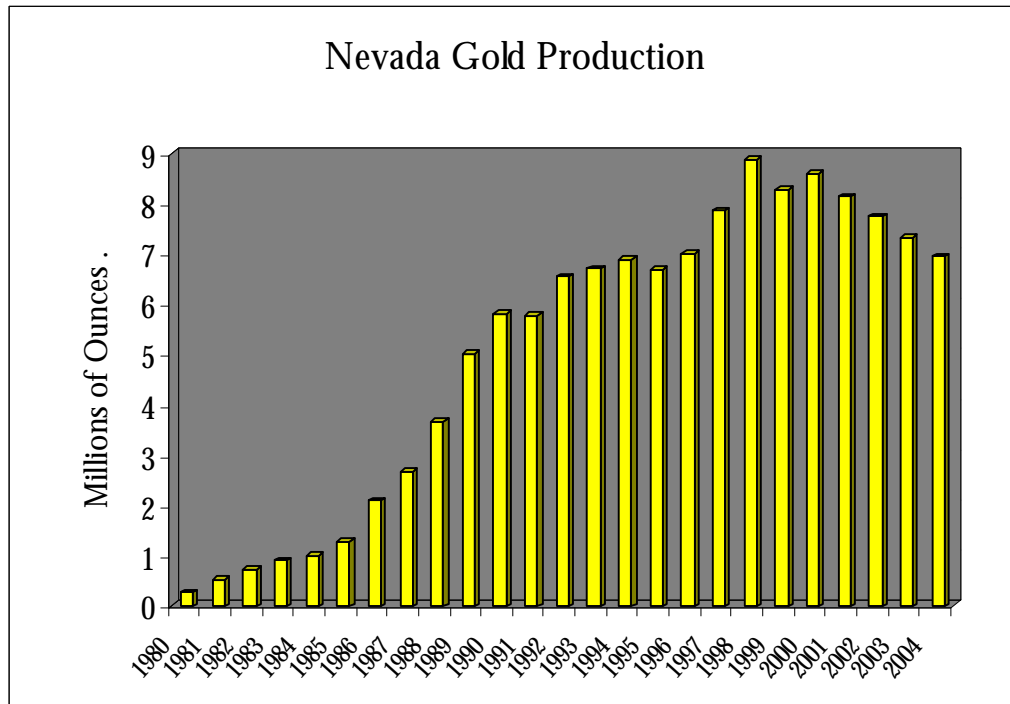
Humboldt, Eureka and Elko counties. Construction is intended to begin in October 2005 and operations in 2008.

- Newmont Mining's Leeville underground operations on the Carlin Trend are expected to begin production in late 2005 or early 2006 and produce approximately 600,000 ounces per year.
- Newmont Mining plans commissioning its Phoenix operation in Lander County in late 2005 which will produce approximately 420,000 ounces of gold and 21 million pounds of copper per year over an estimated mine life of 15 years.
- Placer Dome and Newmont Mining's joint venture at the Turquoise Ridge Mine at Getchell in Humboldt County is expected to almost double its 2004 production to 300,000 ounces in 2005.
- Quadra Mining has reopened the Robinson Mine near Ely and is shipping copper concentrate for refining to various sites.

All in all, 2004 and the first half of 2005 have brought a lot of investment, activity and good news to the Nevada mining industry.

HIGHLIGHTS OF NEVADA MINERAL PRODUCTION

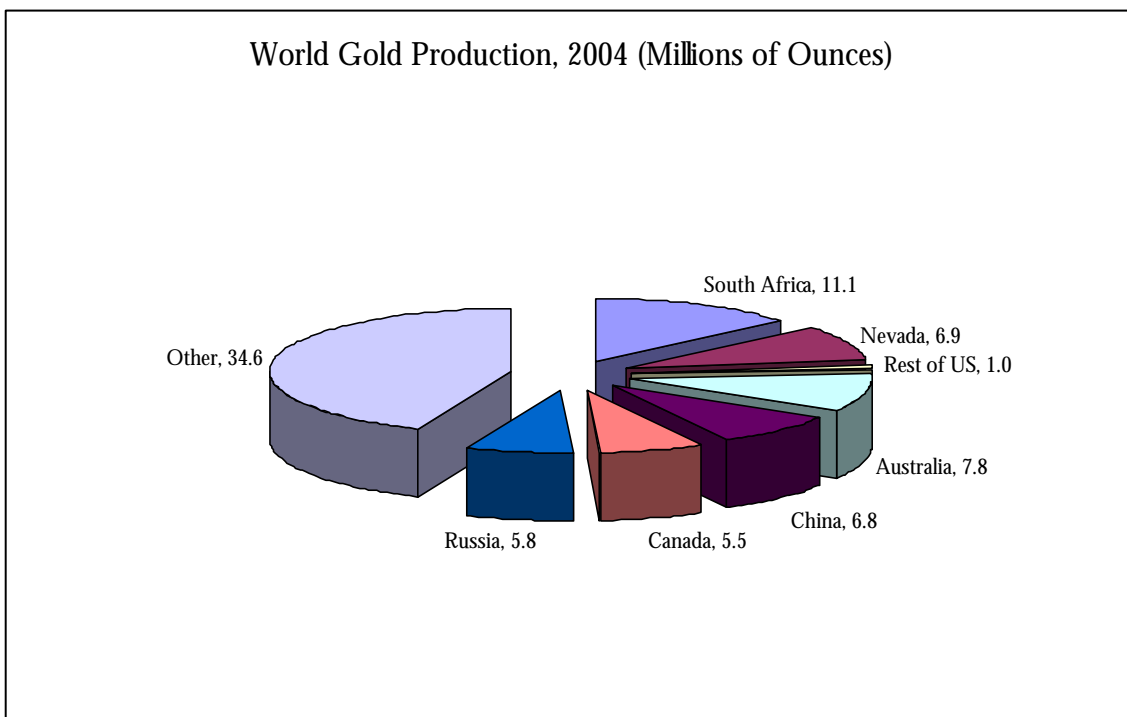
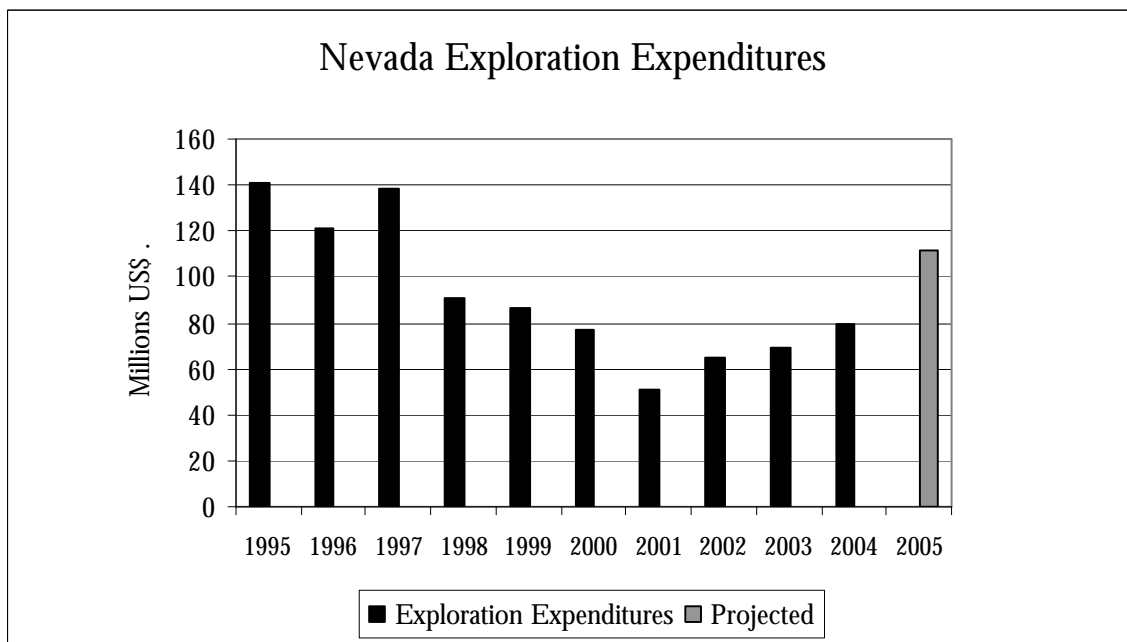
GOLD



- Nevada operators produced 6.94 million ounces of gold in 2004 worth approximately \$2.8 billion at the 2004 average price of \$410 per ounce. This compares with 7.32 million ounces worth \$2.7 billion in 2003.
- Nevada's production declined for the fourth straight year as a result of lower grades and several mine closures.
- Nevada gold production accounted for over 87 percent of total US production and approximately 8.7 percent of world production.
- Nevada ranks as the third largest gold producer in the world behind South Africa and Australia, which produced 11.1 and 7.8 million ounces, respectively, in 2004.
- The Nevada Division of Minerals reports over 20 major gold/silver mines in Nevada although several of these (e.g. Hycroft, McCoy/Cove, Denton-Rawhide, and Ruby Hill) are closed or operating at reduced levels (e.g. the

Rain Mine, Trenton Canyon Mine), and a number of these “operations” have multiple points of extraction, or “mines”.

- Gold exploration expenditures continued to grow in 2004 and are expected to top the \$100 million mark in 2005.



OTHER 2004 MINERAL PRODUCTION

SILVER

- Nevada silver production remained relatively steady in 2004 at 10.3 million ounces compared to 10.2 million ounces in 2003. This, however, is down significantly from 13.6, 17.2 and 23.2 million in 2002, 2001 and 2000, respectively. The decrease in silver production in recent years has been due to the closure of several large silver producing mines in the past few years such as McCoy/Cove and Denton-Rawhide.
- The Coeur-Rochester mine in Pershing County remains the state's largest silver producer at 5.7 million ounces in 2004.
- Silver prices averaged \$6.67 per ounce in 2004, up from \$4.88 per ounce in 2003. Current prices (mid-2005) are over \$7 per ounce.
- The calculated value of 2004 silver production in Nevada was \$68.7 million compared to \$49.8 million in 2003.

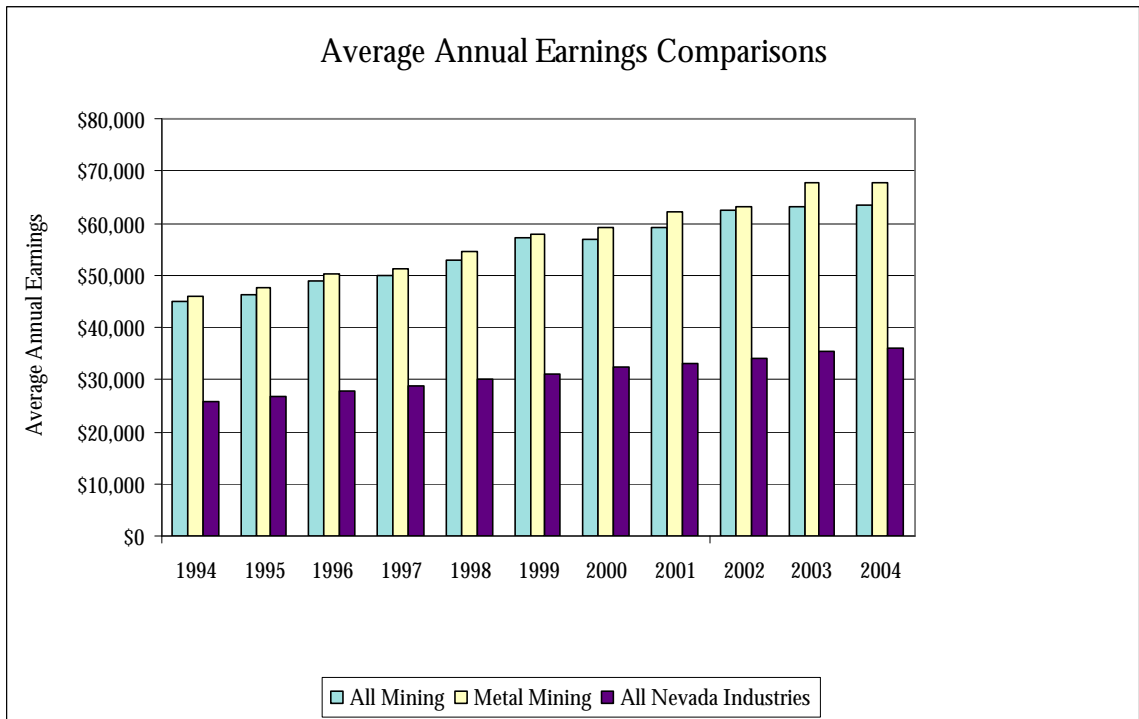
OTHER MINERALS

- Nevada oil wells in Nye and Eureka counties produced 463,000 barrels of oil in 2004 compared to 493,330 in 2003, down from 553,428 in 2002. Gross proceeds from oil production were \$14.8 million in 2004 indicating an average price per barrel of \$31.98 compared to \$24.54 in 2003.
- Nevada geothermal wells produced 1.67 million megawatt hours of electricity in 2004 as well as providing domestic, public and commercial heating in several parts of the state. Geothermal electric production came from 14 plants at 10 different sites, and is sufficient to provide electrical energy for approximately 80,000 typical homes.
- Nevada mines also produced numerous other minerals including Aggregates, Barite, Diatomite, Dolomite, Gypsum, Limestone, Lithium carbonate, Magnesium oxide, Perlite, Precious Opals, Salt, Silica Sand, and Specialty Clays.
- The total value of all mineral production (excluding oil and geothermal production) in 2004 was \$3.3 billion, up from \$3.0 billion in 2003.

MINING EMPLOYMENT AND PAYROLLS

2004 Average Direct Employment	11,690 jobs
2003 Average	8,780
2004 Total Direct Payroll	\$605 million
2003	\$553
2004 Average Salary for metal mining in Nevada	\$67,652/year
2003	\$67,795
2004 Average earnings for All Mining	\$63,388
2004 Average earnings in All Industries Statewide	\$36,088

(Source: Nevada Department of Employment, Training and Rehabilitation)



ECONOMIC IMPACTS OF MINING

- Mining increased state output by \$5.89 billion including both direct and indirect impacts, up from \$5.35 billion in 2003.
- Generated approximately 62,700 total jobs in Nevada in 2004 including both direct and indirect impacts compared to 57,000 total jobs in 2003.
- Contributed \$1.81 billion to Nevadans' personal incomes in 2004 compared to \$1.65 billion in 2003.

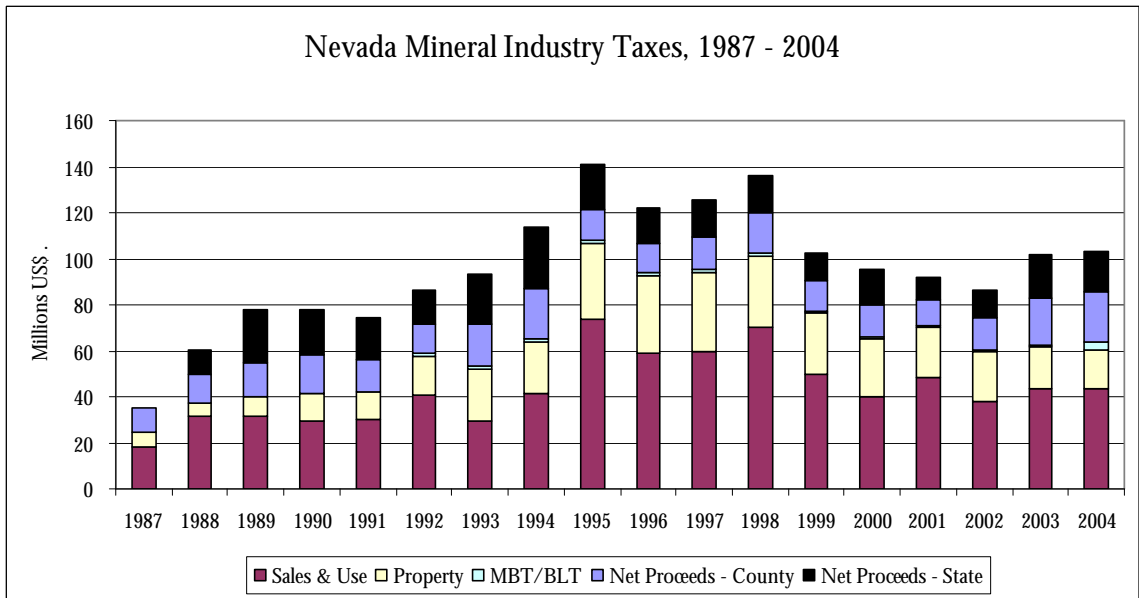
(Source: U.S. Department of Commerce, Regional Multipliers (RIMS II), 1992)

TAXES PAID BY NEVADA MINING

Estimated Direct Taxes Paid by the Mining Industry 2001 - 2004 (\$1,000)

	2001	2002	2003	2004
Net Proceeds of Mines Tax				
County Portion	\$ 11,380	\$ 13,658	\$ 20,139	\$ 21,808
State General Fund	<u>\$ 9,974</u>	<u>\$ 11,987</u>	<u>\$ 18,657</u>	<u>\$ 17,749</u>
Total NPOM Tax	\$ 21,355	\$ 25,645	\$ 38,796	\$ 39,557
Sales & Use Tax	\$ 48,257	\$ 37,615	\$ 43,350	\$ 43,170
Property Tax	\$ 21,762	\$ 22,000	\$ 18,480	\$ 17,000
Business License/ Modified Business Tax	<u>\$ 900</u>	<u>\$ 800</u>	<u>\$ 700</u>	<u>\$ 3,710</u>
Total	<u>\$ 91,719</u>	<u>\$ 86,185</u>	<u>\$ 102,121</u>	<u>\$ 103,437</u>

(Source: Nevada Department of Taxation and industry surveys)



NEVADA MINING: A REVIEW AND OUTLOOK

Nevada is the “Silver State” because at the time of admission into the Union in 1864 silver mines in the Comstock Lode under Virginia City were the driving force in its economy and the rationale for its admission. Nevada is still a major silver producer and produces more silver ounces than gold. But with gold priced at over \$400 per ounce and silver at around \$7, gold has replaced silver as the state’s most important mineral commodity.

As described in previous editions of this Overview, Nevada’s mining industry is in what some have labeled as a “second renaissance.” From its beginnings in the Comstock era, its first renaissance occurred after the turn of the 20th century in silver and gold mining towns like Tonopah and Goldfield and with the beginning of copper mining near Ely. The 1980’s, however, saw the development of numerous large-scale gold mining operations in central, northern, and eastern regions of the State that has vaulted Nevada into the position of a major world gold producer.

Since the revival of the industry in the 1980’s the industry has been through several price cycles that have driven investment cycles. High prices in the early 1980’s, when gold prices ranged from an annual average over \$600 in 1980 to the high \$300 range, spurred the revival. Prices declined in the mid 1980’s to the low \$300 range then revived again at the end of the decade. The pattern was much the same in the 1990’s, prices declined in the early part of the decade, revived in the mid 1990’s and then declined to 30 year lows in the late 1990’s. The recent price recovery that began in 2002 possibly starts yet another round.

What is important to note about these cycles is that throughout the past two decades, and in spite of these cycles, the industry has managed to build a large, efficient and economically viable capital base that is fundamentally sound and sustainable well into the next decade. This capital base has been built through the investment of over an estimated \$20 billion in exploration and expenditures on plant and equipment since 1980. The sustainability of this capital base is evident in both the industrial, commercial and social infrastructure that has developed around the industry and, more recently, a significant expansion of its reserve base as a result of the recovery of prices and increased exploration.

In 2003 and 2004 proven and probable gold reserves in the state have increased to over 80 million ounces in spite of having mined over 14 million ounces in those years. These reserves represent the future of the industry and will allow it continue current levels of production for over a decade at current prices.

2004 INDUSTRY DEVELOPMENTS

GOLD PRICES

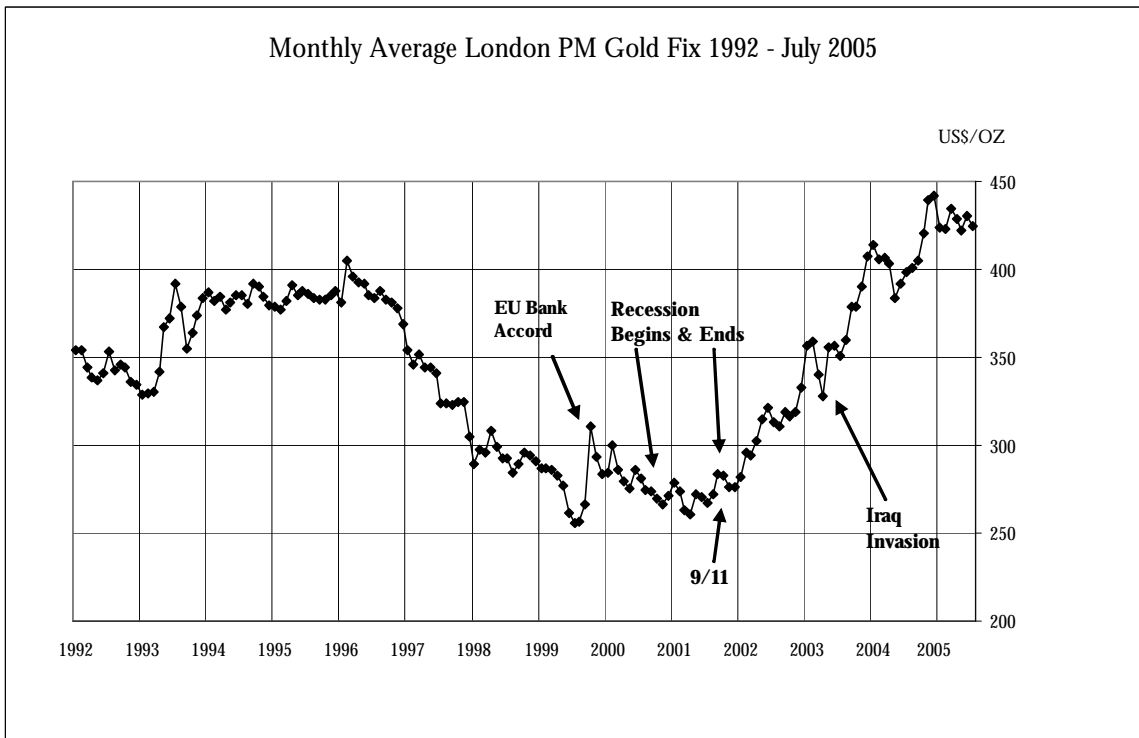
Clearly, the most significant development in gold markets in the last decade has been the decline and the recent resurgence in gold prices. The price of gold is the prime mover of exploration, mine development and production. Gold prices declined from over \$400 per ounce in early 1996 to \$252 per ounce in July 1999. The price then rallied in September of 1999 on news of an agreement among European central banks to limit sales to 400 tonnes, or approximately 12.9 million ounces, per year through 2004.

European central banks' role in gold markets have clearly diminished, however, developments in gold markets in 2001 through 2005 have clearly been much more related to weakness in the U.S. dollar vs. the Euro. International events like the war in Iraq and terrorism around the world, and things are normally linked to gold prices, have not really been significant factors in gold's rising price.

As the gold price chart below indicates, gold prices reached their lowest level in mid-1999 at \$252 per ounce. In real, inflation adjusted terms, this was the lowest level since 1972 when the U.S. went off the gold standard and gold was pegged at \$35 per ounce. As noted above, prices rallied in late 1999 on the news of the EU Bank Accord but quickly lost momentum when traders realized that EU banks had agreed to limit sales to more ounces than they had sold in the previous five years.

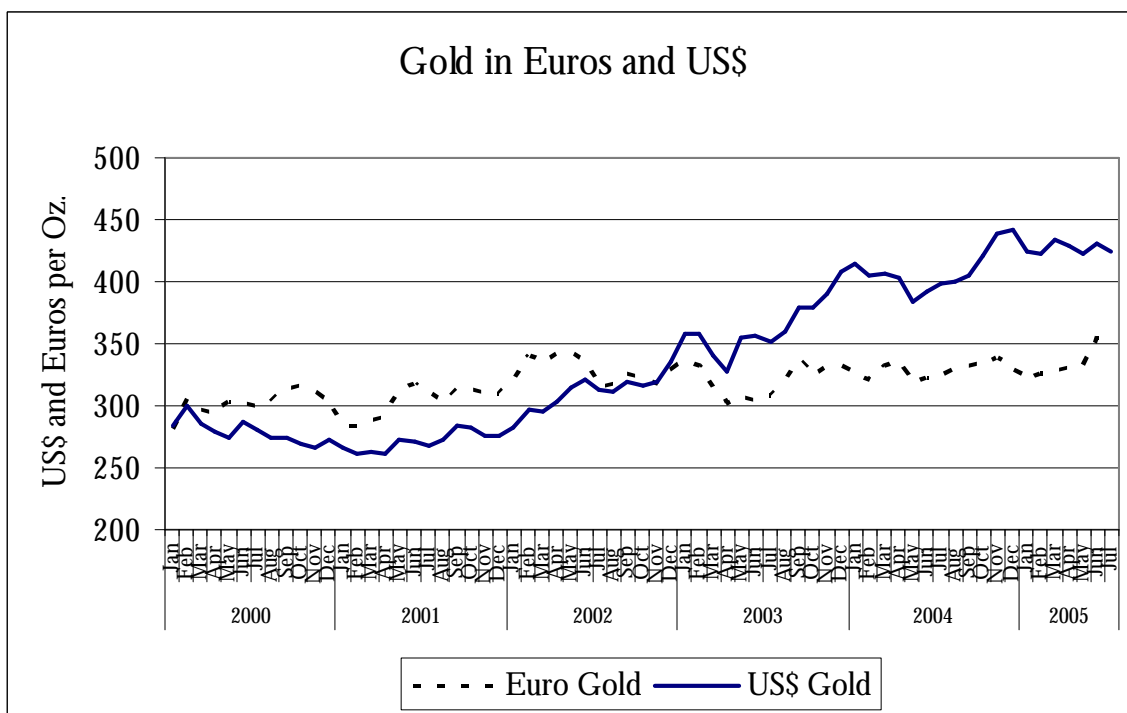
Prices also surged following the 9/11 attacks in New York and Washington, but the impact was short term and modest. Prices spiked at over \$380 per ounce in early February 2003 on the threats of war with Iraq. However, as in the case of the 1991 Persian Gulf War, prices quickly retreated after the beginning of hostilities. If these events could not lift the price of gold, it seems reasonable to ask what could?

The lack of any significant impact of these cataclysmic events also raises questions about the conventional wisdom that gold reacts to such events. The record of the past several years seems to suggest that gold prices are much more responsive to standard macroeconomic events. To put the matter in perspective, the US economy suffered through two pretty tough years in 2000 and 2001: It suffered through a cliff-hanger election that created significant controversy and uncertainty; a significant decline in the stock market (the S&P 500 fell almost 50 percent from its peak in early 2000); the 9/11 attacks; pursuing the war on terrorism; to a string of corporate scandals.



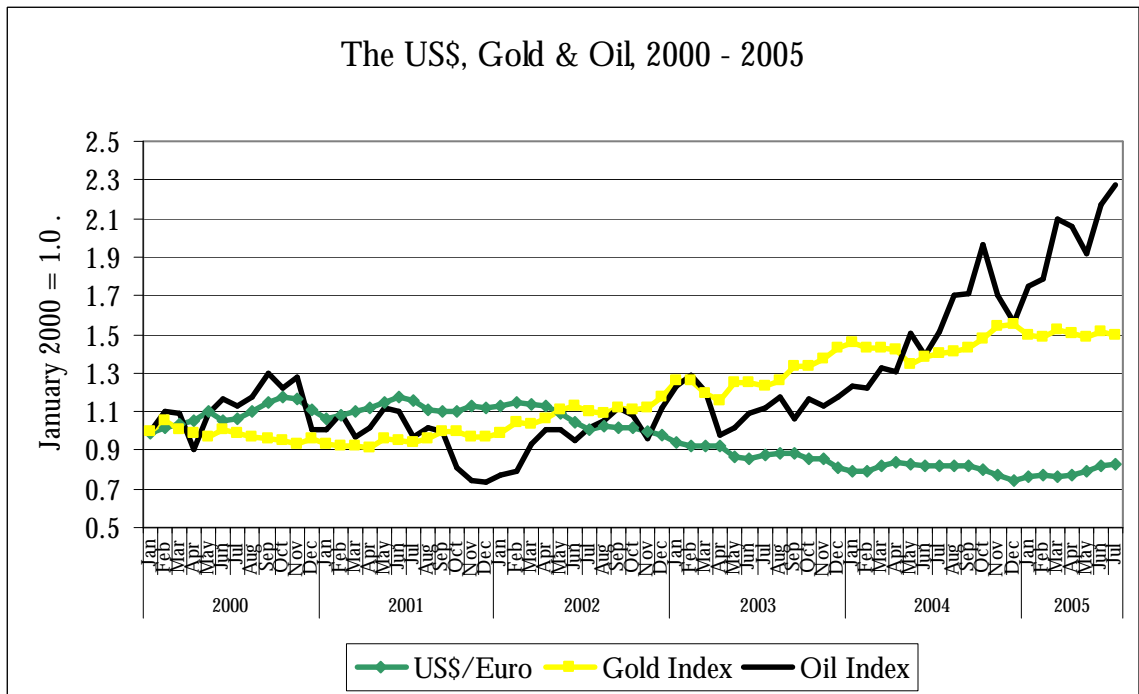
Putting all this behind it, the economy started growing in early 2002. As it grew unemployment began to level off and decrease, consumer spending and imports grew. The latter, because the US economy was growing much faster than the European economies, set off the decline of the US dollar against the euro. This decline occurred because of rising US trade deficits.

The graph below shows the effects of these events on the price of gold, which, because it is sold in efficient international markets, adjusts instantly to changes in currency values. The euro was floated in 2000 at \$1.10 and began declining relative to the dollar. As a result, the euro price of gold rose. After the events described above the dollar started declining and lead to a convergence of euro and dollar at the end of 2002. From that point until the present the dollar price of gold has risen and, while the euro price of gold has risen some, not as much as the dollar price. The space between the two curves on the chart below basically represents a premium for Nevada gold miners due solely to a weak dollar.



Other significant factors affecting gold markets besides currency movements, and which are undoubtedly contributing to gold price increases against other currencies like the euro, has been the significant growth in Asian economies, particularly China, India and, to a lesser extent, Japan. This growth has set off growth in demand for virtually all mineral commodities such as copper, which has more than doubled in price over this period, silver, nickel, and most significantly, oil.

The graph below shows indices for the euro value of the dollar, the price of gold, and the price of crude oil divided by their values in January 2000 to illustrate these trends. The graph shows that the dollar has depreciated about 15 percent against the euro in the period while gold has appreciated about 50 percent; hence approximately 35 percent of gold's appreciation has been due to something besides the dollar's decline. The most likely explanation for this 35 percent increase in gold is an increase in demand from traditionally large consumers of gold that experiencing large increases in income: India and China, and because of high oil prices, the Middle East.



These trends present a “good news, bad news” situation for Nevada’s gold industry and, indeed, the economy of rural Nevada. The “good news” is obviously that the price of gold is up. The “bad news” is that gold and other mining are energy intensive activities and higher oil and energy prices are driving producers’ costs up. The “bad news” for consumers in Nevada’s rural economy is that many frequently drive long distances to work and sometimes even a grocery store, and higher gas prices hit them in their pocketbooks. However, on the whole, the region’s economy is clearly better off in spite of these drawbacks.

OPERATIONS

Mining operations consist of five distinct activities: permitting, exploration, development, extraction or mining, and reclamation. In a simplistic view, these activities occur in the order listed above, however, in reality they generally occur simultaneously.

Permits from state and federal regulatory agencies are required for each stage of the process although initially, permits are generally only sought for exploration. Part of this permitting process involves providing financial assurance that any environmental disturbances caused by operations will be reclaimed. The permitting process is required by various environmental laws and regulations, principally the National Environmental Protection Act (NEPA) and the Federal Land Policy and Management Act (FLPMA). However, there are many other laws and associated regulations that regulate mining operations that deal with a wide variety of issues

from protecting antiquities to protecting endangered species, water and air quality both during and after mining.

With appropriate permits, prospectors explore for minerals and, if successful, they proceed to the development stage. Development generally consists of constructing access roads, processing facilities, and perhaps removing overburden (non-mineral bearing materials, or waste). Before development can proceed, however, the prospective operator must prepare a “Plan of Operations” which describes what development and mining operations will involve and how disturbances caused by operations will be reclaimed. The Plan of Operations is subject to regulatory and public review and must describe how the operator will avoid or mitigate any adverse impacts on the environment.

Permitting is an increasingly important part of mining operations and has added significantly to the cost of mine development. In the mid 1990’s the permitting process to develop Placer Dome’s Cortez mine took five years at a cost that is difficult to calculate but not the least of these costs was having to wait five years to develop the resource. Newmont’s Phoenix mine, which is scheduled to be commissioned in late 2005, began the permitting process nine years ago. These processes take this long for a variety of reasons, some very legitimate and some less so. The process requires compilation of large quantities of geological, technical and environmental data to develop a Plan. The Plan then requires review by state and federal regulatory agencies as well as by the public before permits to proceed can be issued. It is at this point that the process gets extended as environmental groups in particular but sometimes others generally challenge every permit through administrative appeals and lawsuits. The fact that virtually every appeal is rejected suggests that the process is being abused to the detriment of the industry and the state.

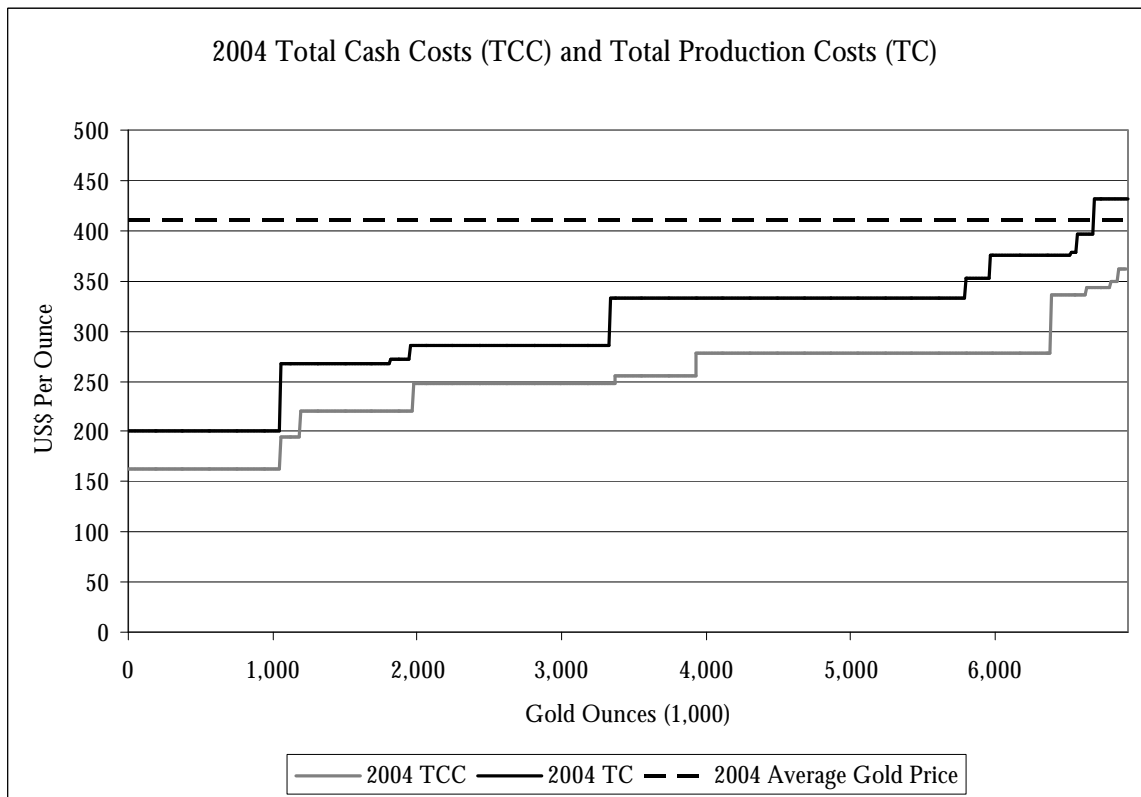
Once the permitting process is completed operators can proceed to development and eventually, mining and processing ore. Currently, there are approximately 18 active gold and silver operations. However, since some of these operations involve multiple points of extraction, or “mines”, where multiple mines feed common processing facilities, it is more accurate to talk about operations than mines. There are a number of mines that are currently closed but where prospective operators are in some stage of feasibility study or permitting to reopen them and there are also a number of mines in the development phase.

In 2004 active operations produced 6.94 million ounces of gold and 10.3 million ounces of silver. The cost of production for operations is determined by factors such as the grade of the ore processed, the amount of waste rock that has to be moved to get at the ore commonly referred to as the “stripping ratio”, the processing methods used, whether the mines are open pit mine or underground, etc. All of these factors will generally be unique to each operation and, consequently, different operations will have different costs of production.

A consequence of low gold and silver prices during the late 1990's and early 2000's was that operators made concerted efforts to reduce their production costs. As prices have risen over the last two years operators have been able to expand their reserves and process lower grade materials. This, however, has caused their costs to rise. Another factor contributing to rising production costs at Nevada mines has been significant increases in fuel and energy costs.

Mining costs are generally referred to as “**total cash costs**” and “**total costs.**” Total cash costs refer to costs that vary with production and include payrolls, electric power, fuel, chemicals, production taxes, etc. They are costs that producers must pay to stay in operation. They are referred to as “total” cash costs because they include taxes and royalties which are not really costs of production but nonetheless have to be paid to operate legally. Prices above a producer's total cash costs, but below total production costs, merely allow the producer to maintain a positive cash flow, however, a price equal to a producer's cash cost does not allow it to recover any of its investment or earn a profit. Total costs include total cash costs but also include non-cash costs such as depreciation of capital plant and equipment.

The graph below has been constructed to show total cash costs and total costs for each Nevada gold producer that reports them in public disclosures such as annual reports. The graph also shows the 2004 annual average price of gold.



To construct this graph mines are ordered, from left to right, from the lowest to the highest cost producers. The cost of production is measured on the vertical axis. Hence, the length of each horizontal segment of each “curve” represents the output of one mine or group of mines operated as a unit, and the height of the segment represents its cash and total costs, respectively. Also shown on the graph is a dashed horizontal line at \$410 to show the relationship between production costs and the 2004 average gold price.*

So, for example, the total cash cost curve shows that the state’s lowest cost mine produced just over 1 million ounces of gold at a total cash cost of \$162 per ounce. The mine with the second lowest production costs was a relatively small mine with 141,000 ounces of production at \$195 per ounce. The longest horizontal segment of the curve representing over two million ounces of production is Newmont’s operations on the Carlin Trend northeast of Carlin and Valmy Trend near Valmy. This production comes from numerous points of extraction, or mines, but because they are operated as a unit, using common processing facilities by trucking ore between sites, they all have the same average costs.

The total cost curve is constructed similarly with each horizontal segment representing the production of one operation. However, because of differences in non – cash costs among producers, the curves do not match up vertically. That is, a mine represented by a segment of the total cash cost curve may be different than the mine represented on the total cost curve directly above it.

Among other things, the cost curves indicate that all of the state’s mining operations showed an **operating** profit in 2004. That is, the entire total cash cost curve is below the dashed line representing the average 2004 price of \$410 per ounce. Emphasis is placed on **operating** profit because production costs do not include costs such as corporate overhead items, off – site exploration, and other items. An operating profit simply means the operation has a positive cash flow, not that it is profitable. The graph also illustrates that all but two of the operations represented operated with total costs below the \$410 dashed line, which is also a significant improvement over the past few years.

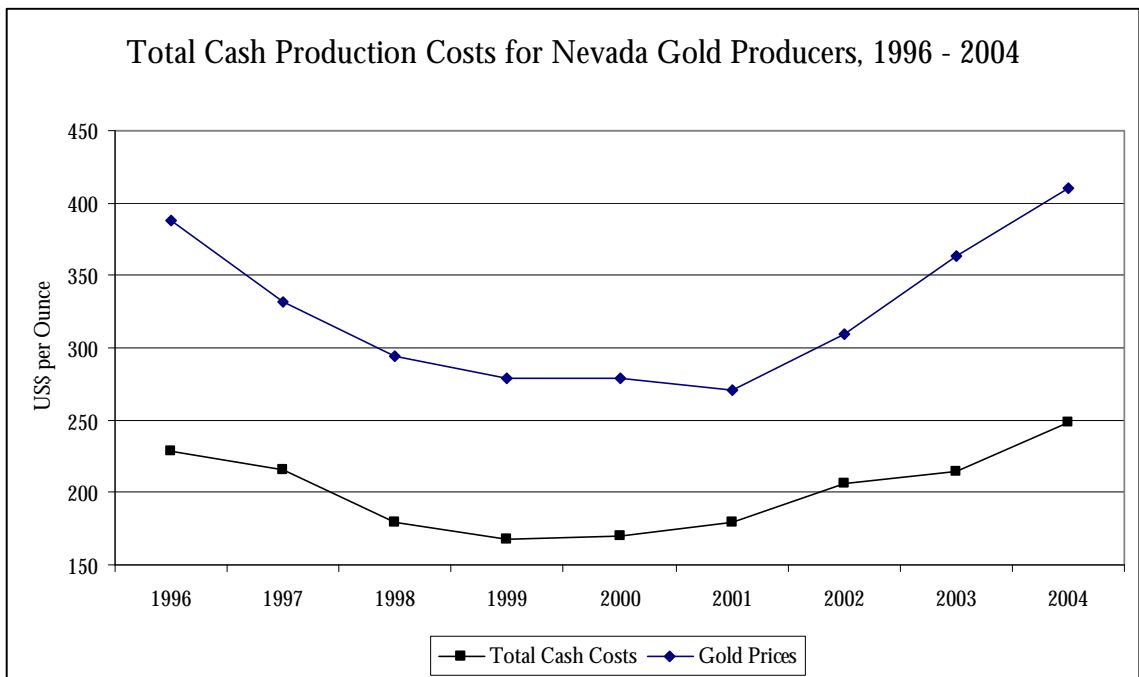
The profitability of an operation is better viewed in terms of the total production cost curve. In 2004 only one operation reporting had total costs above the average price of gold in the year, a significant improvement over the several years when there were several operations in that situation, some of which have since closed. It should also be noted that the profitability of operations illustrated on the graph does not necessarily bear any relationship to the profitability of the corporations that own these operations that can be found in annual financial reports.

* It should be noted that the gold production represented on the horizontal axis is from primary gold producers who report their costs in terms of ounces of gold. The state’s lone primary silver operation reports their costs in terms of ounces of silver so their gold production is not shown. Similarly, most gold operations produce some by-product silver which they report in terms of “gold equivalent” ounces. Hence, the gold production shown is actually “gold equivalent ounces”. Based on the ratio of 2004 average prices of gold and silver, \$409.72 to \$6.67, it takes 61.4 ounces of silver to make one “equivalent” ounce of gold.

The costs on the graph only represent the cost of producing gold at these operations and do not include funds spent in exploration to find new reserves or, for example as noted above, the cost to Newmont and Barrick to construct power plants which will lower their costs in the future. Also not included in the costs above are the costs for in house experts, consultants and lawyers that are needed for the permitting process.

Overall, the weighted average total cash cost in 2004 was \$248, up from \$215 in 2004, primarily reflecting lower ore grades and higher energy costs. The graph below shows a comparison of 2003 and 2004 total cash costs.

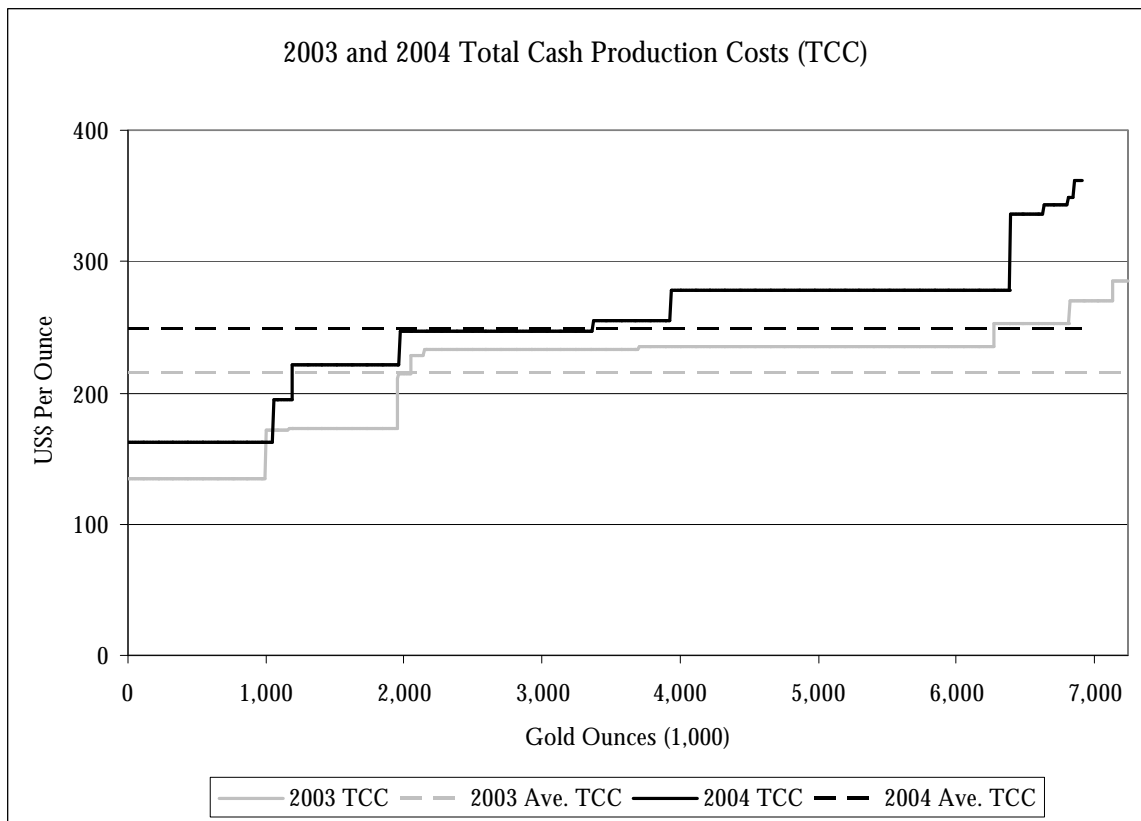
During the years of declining prices from 1996 to 2001 operators made many efforts to cut their costs to stay in business. From 1996 to 1999 weighted average total cash production costs went from \$229 to \$168 per ounce, a decrease of 27 percent. These cost reductions were achieved by various means such as delaying or reducing development and exploration projects and, when possible, stockpiling lower grade ores rather than processing them. Operators tried to preserve their workforces by getting rid of contractors and letting their own employees do what the contractors were doing which also cut costs. Even with these kinds of efforts mining employment still fell by thousands of workers.



As the graph above illustrates, as prices declines moderated in 1999 and 2000 production costs leveled off as well, and as prices starting increasing in the past two years costs have returned to their previous levels. The reasons for these costs increases are basically the reverse of why they declined. Exploration and development projects were accelerated and lower grade ores are being processed.

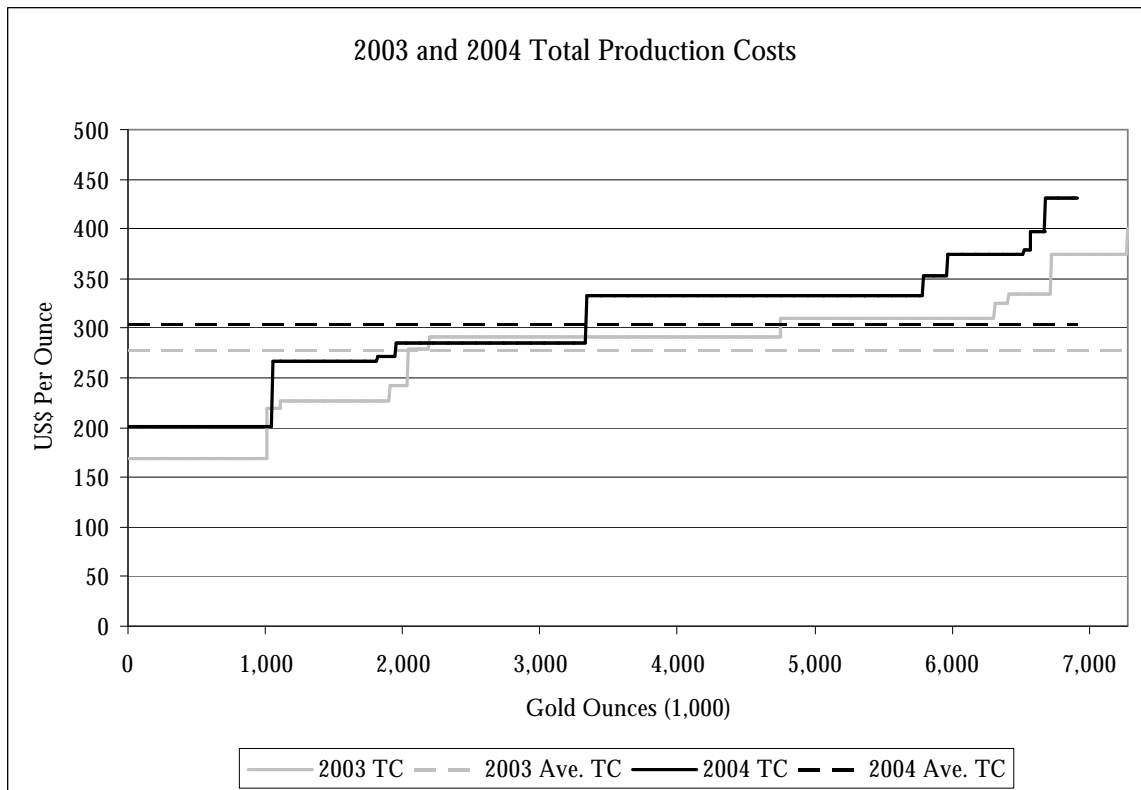
One additional and very significant factor, however, has been the substantial rise in energy costs.

The graph below shows the 2004 total cash cost curve in comparison to the 2003 curve and the weighted averages for the respective years. Overall, cash costs increased 14.8 percent in 2004. The most noticeable difference is at the high cost (right) end of the curve where the cost increases were greater. Operators in the middle of the curve appear to have done the best job of controlling costs.



Below is a graph with the same comparison of total production costs. The scales of the two distort a visual comparison that suggests that cash costs have shifted up more than total costs but, in fact, that is correct. The 2004 weighted average total cost of production increased by 8.5 percent over 2003 compared to the 14.8 percent increase in cash costs. Weighted average total production costs were \$301 in 2004 versus \$277 in 2003.

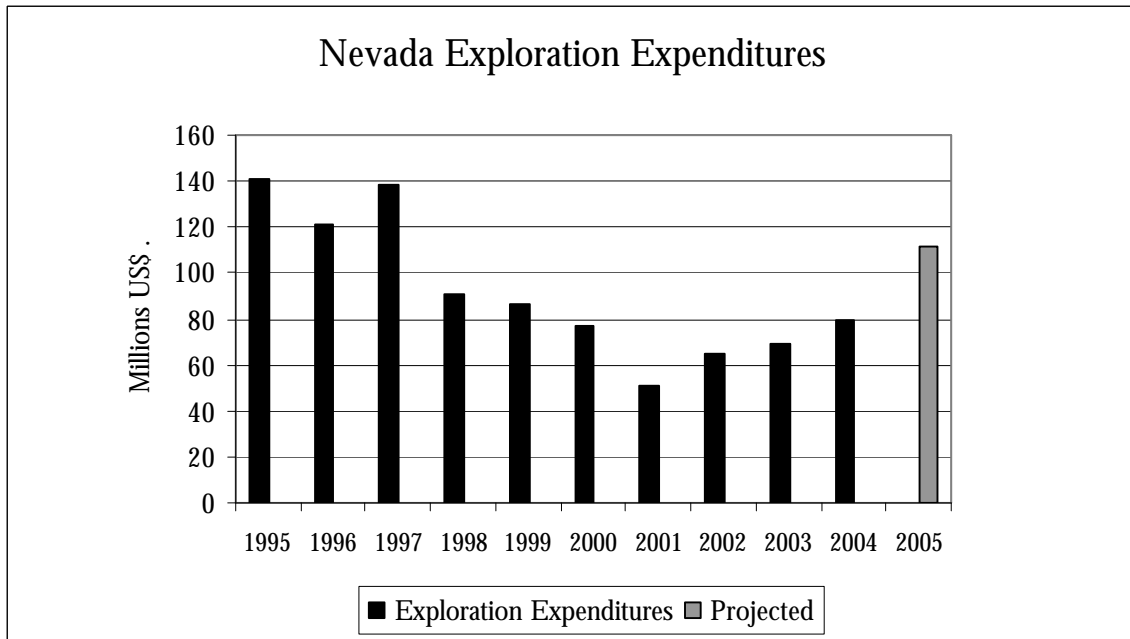
The costs that get added to cash costs to determine total costs reflect non-cash costs such as “overhead” such as depreciation of equipment, as well as other factors such as the costs of obtaining permits for exploration and operations. These costs tend to more stable than cost changes caused by changes in ore grades and energy costs.



EXPLORATION ACTIVITIES IN 2004

In 2002 exploration activity in Nevada reversed a 5-year downward trend and increased from \$51.2 million spent on exploration in 2001 to \$64.6 million. 2003 and 2004 continued the new upward trend with expenditures estimated by the Nevada Division of Minerals at \$69.2 and \$79.9 million, respectively as illustrated by the graph below. These increases are clearly welcome signs, but even at \$79.9 million, exploration expenditures are still well below the levels spent in the mid – 1990’s when expenditures routinely surpassed \$100 million per year. The Nevada Division of Minerals’ 2004 Nevada Exploration Survey, however, shows that the \$100 million mark should be surpassed in 2005 with responding companies reporting that they will spend \$111.9 million.

Most exploration activity is occurring in the general areas of the Carlin and Battle Mountain Trends since these are proven areas of gold mineralization. The Carlin Trend basically extends from Carlin on Interstate 80 northwest to Midas, although most mining activity is at the southern end of that extension. The Battle Mountain Trend, also sometimes called the Cortez Trend, extends from Valmy on Interstate 80 southeast to Eureka.

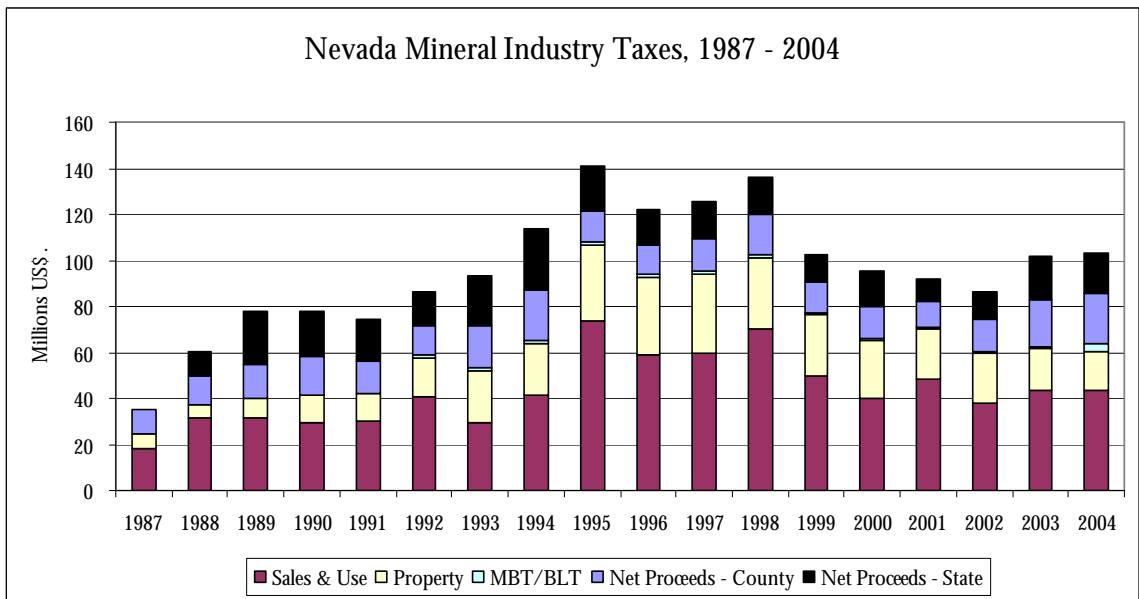


The previous edition of this report noted delays in getting approval of the bond amounts for exploration projects from the BLM. These regulatory delays create incentives for companies to explore outside of the U.S., particularly when the permitting process for developing a mine in the U.S. is likely to take years rather than the months it takes overseas. Fortunately, the BLM appears to have worked out some of the problems in the process and exploration activity is on the rebound as the graph above indicates. This rebound, however, is largely due to higher gold prices and the State's favorable geology. Nonetheless, streamlining regulations and processing permits is welcome news.

The record shows that this exploration has paid off for companies pursuing gold in Nevada. At year-end 2003 Nevada's gold reserves stood at 77.3 million ounces. At year-end 2004 they stood at 80.4 million ounces. This implies that exploration has resulted in the discovery of 3.1 million ounces of plus 6.9 million to replace the gold mined in 2004, or about 9 million ounces of added to reserves in 2004. Year-end 2004 reserves are sufficient to maintain current levels of production at current prices for over 11 years.

STATE AND LOCAL TAXES PAID IN 2004

Total state and local taxes paid by the mining industry in 2004 increased slightly in 2004 to \$103.4 million after a much larger increase in 2003 to \$102.1 million from \$86.2 million in 2002, an 18.5 percent increase. Note that this figure includes taxes paid by operators and does not include taxes paid by industry employees. The figure below shows taxes paid by the industry in Nevada since 1987.



As the figure above illustrates, total taxes paid by the Nevada mining industry in recent years had been in a downward trend since 1999. This trend was primarily due to low gold prices affecting Net Proceeds of Minerals Tax (NPOM) receipts. Low gold prices also led several mines to close during this period and others to seek lower assessments for property tax purposes. Low gold prices were also responsible for operators reducing their purchases of equipment, which, in turn, reduced Sales and Use taxes paid.

2003 saw a reversal of this trend primarily as a result of increased NPOM taxes. NPOM taxes paid in 2003 increased almost 34 percent compared to 2002, from \$25.6 to \$38.8 million. In 2004 NPOM taxes as well as Sales and Use taxes paid by the industry were about the same as 2003. The other major tax paid by operators, the ad valorem property tax declined slightly in 2004, from an estimated \$18.5 million to \$17 million. The major change in industry taxes in 2004 came from the introduction of the Modified Business Tax (MBT on the graph) to replace the Business License Tax (BLT on the graph). BLT tax payments by the industry had

been less than one million per year while MBT payments, which are based on payrolls rather than employment, were an estimated \$3.7 million.

Each of these major taxes paid by the industry responds to the price and industry growth cycle in slightly different ways. The increase in NPOM taxes in 2003 primarily reflected the increase in gold prices. With the relatively stable production costs and production noted above, commodity price increases directly increase Net Proceeds, which are Gross Proceeds less deductible production costs (not all production costs described above are deductible). Operators with over \$4 million in Net Proceeds pay five percent tax on their Net Proceeds. In 2004, although gold prices increased over 2003 levels, NPOM taxes increased very little because of the significant increases in production costs noted above. Other deductible costs such as near mine exploration also increased as noted above. In the future, as newly discovered near mine reserves are developed and brought into production, these development costs will be deductible. Hence, when commodity prices rise significantly, as they have over the past three years, the initial effect on taxes is felt in higher NPOM revenues. However, as operators adjust to higher prices by processing lower grade ores and investing in exploration and new development, these tend to reduce increases in NPOM tax revenues.

Sales and Use taxes, which are primarily paid on purchases of capital items and equipment, have historically been the largest taxes paid by the industry. These taxes primarily depend on the rate of investment in the industry. As indicated by the graph above, relatively high rates of investment in new plant and equipment in the mid – 1990's led to relatively high sales and use tax payments. These payments declined in the late 1990's as the industry reduced its rate of investment and limited equipment purchases to replacing existing capital. If current gold prices are maintained and result in new mine development and existing mine expansions, we would expect sales and use tax receipts to increase in future years.

Ad valorem property taxes are also generated by industry investment, but tend to lag even farther behind the commodity price cycle than sales and use taxes. Over the past few years property taxes have declined as a result of mine closures. These closures have led to reassessment of both real and personal property reflecting the reduced value of the site after mining stops and reclamation begins, and the liquidation of capital equipment.

Because of the way the three major taxes paid by mining are allocated, approximately 2/3 of the total tax payments stay with local government as opposed to the state general fund. These tax dollars are available for city and county operations, and local education expenditures in the areas where mining takes place.

An issue that is frequently raised in public policy debates at both the state and national level concern the imposition of taxes and royalties on the minerals industry. One of the common misconceptions about the minerals industry that frequently arise in these discussions: This misconception is that since the mining company cannot move the mineral deposit, mines are immobile sources of wealth that can be taxed

without consequence. While it may be true that a mineral deposit is immobile, there is ample evidence and numerous examples that will attest to the fact that **mining capital**, which includes both technical expertise and investment funds, **is highly mobile**. Hence, this rationale for mineral taxation and the imposition of royalties is myopic at best. The failure of exploration spending in Nevada to rebound to mid – 1990’s levels in spite of a rebound in gold prices because of the uncertain regulatory environment is an indicator of just how mobile mining investment can be.

As always, the key to sustaining tax revenues from Nevada’s minerals industry is maintaining capital investment in the industry’s production capacity and investment in mineral exploration. Nevada’s unique geology is clearly the most important factor in attracting capital investments and exploration expenditures. However, Nevada’s tax and regulatory environments also play a key role in industry investment decisions. Through the cooperation of the industry, the State of Nevada has developed reasonable tax and regulatory environments and, with its unique geology, a world class minerals industry capable of sustaining production well into the next century.

PRECIOUS METALS INDUSTRY PROFITABILITY

Another common misconception about the mining industry, and precious metals mining in particular, is that it is an enormously profitable venture. If this were true, according to conventional wisdom and common sense, we would all become gold miners. Nonetheless, the misconception is difficult to dispel. Indeed, the term “gold mine” is commonly applied to anything highly profitable. Precious metals mining can be very profitable and producers invest in production capacity in hopes of earning profits, but industry profits are highly leveraged by metals prices and operating costs.

One reason that the misconception about the profitability of the precious metals industry is difficult to dispel is that, indeed, some gold mines are very profitable and, as the discussion of production costs above indicates, some Nevada mines are quite profitable. Hence, the first point to be made with respect to precious metals industry profitability is that, as noted above, the industry consists of mines with a range of costs and the profitability of companies operating the mines varies accordingly.

In an effort to more accurately characterize the profitability of Nevada’s precious metals industry, the annual financial reports of nine Nevada precious metals producers and companies with interests in Nevada were compiled and consolidated. Standard financial ratios such as profit margins, return on investment and return on equity were then computed for each company and for the 9 companies in aggregate. These companies range in size from Newmont with a market capitalization of \$19.8 billion in mid 2004 to Apollo Gold with a market capitalization of \$78.1 million.

The nine companies listed below are public companies with publicly available financial reports. Producers' operations outside Nevada and the U.S. are included in the financial results discussed below because annual corporate reports generally do not differentiate certain financial data by state or nation.

The following list shows the companies included in the analysis:

Apollo Gold	Meridian Gold
Barrick Gold	Newmont Mining
Coeur d'Alene Mines	Placer Dome
Glamis Gold	Queenstake Resources
Hecla Mining	

As a result of merger and acquisition activities in the industry in the past several years, a significant development in the world gold industry during the years of low prices in the late 1990's was the trend toward consolidation through mergers and acquisitions. Nevada producers have been active participants in this trend and, consequently, the list of companies included in the analysis has shrunk considerably and the corporate entities listed above have changed significantly over the past several years and will likely change further in the future. The telling change is the concentration of the industry with Newmont, Barrick and Placer Dome accounting for 87 percent of the market capitalization of the companies on the list, and 92.7 percent of gold worldwide production of the companies listed above. These same three companies account for 87 percent of all Nevada production, and almost 95 percent of Nevada reserves.

The nine companies listed produced a total of 16.8 million ounces of gold in 2004, 41.3 percent of which were produced in Nevada. This stands in stark contrast to the situation 10 years ago when the vast majority of gold produced by "Nevada producers" was produced in Nevada. This figure, however, is up from 27.9 percent in 2003 when AngloGold, one the world's top three gold miners was included in the list. AngloGold sold its majority interest in the Jerritt Canyon mine to Queenstake Resources in mid 2003 and no longer has production in Nevada.*

* AngloGold's production and financial information has been removed from 2003 figures on the table below to make them more comparable to 2004 figures. Kinross' information also removed from 2003 figures because it has not yet filed a 2004 annual report as a result of accounting issues related to its merger with Echo Bay Mines, and a number of other smaller companies with little presence in Nevada that were included in the last report were also omitted.

North American Gold Industry Financial Indicators, 2003 - 2004

	2003	2004
Gold Price	\$363	410
Gold Production (1,000 Ozs.)*	17,746	16,798
Sales**	\$7,474.8	\$8,992.9
Assets**	\$22,973.4	\$27,121.7
Equity**	\$14,864.0	\$16,344.2
Net Income**	\$1,383.4	\$1,226.9
ROE (%)	10.1%	7.5%
NIBTWD***	\$1,425.1	\$1,432.1
ROE (%)****	10.4%	8.8%
Market Capitalization**	\$47,085	\$46,824

* Reflects world-wide production

** In millions of U.S. Dollars

*** Net Income before federal taxes and asset write downs

****Return on Equity before federal taxes and write downs

A common measure used to compare the profitability of different industries is return on shareholders' or owners' equity (ROE). This measure has been widely used by publications such as Business Week, Standard & Poor's Industry Reports and Value Line's Investment Survey because it accounts for factors such as corporate debt in measuring profitability. ROE measures profitability by showing net income as a percentage of the assets shareholders actually own, as opposed to measures like return on assets and profit margins (net income as a percent of total revenues), which ignore corporate debt.

The table above shows ROE for this group of North American precious metals producers in two ways. ROE is first calculated on net income before federal income taxes and second, on net income before federal income taxes and asset write-downs (NIBTWD). The difference between the two is that the latter (NIBTWD) ignores accounting losses associated with the abandonment of investments made in previous years. In profitable industries the differences between NI and NIBTWD are not generally significant. Note that in the 2000 – 2004 period the difference between Net Income and NIBTWD has narrowed considerably, indicating fewer write downs of assets. As would be expected given gold price increases, industry Net Income increased substantially in 2003, doubling over its 2002 level after years of losses and meager earnings. This suggests that, thanks to higher gold prices, the North American precious metals industry has worked its way through the difficult period of the late 1990's and is in much healthier financial condition.

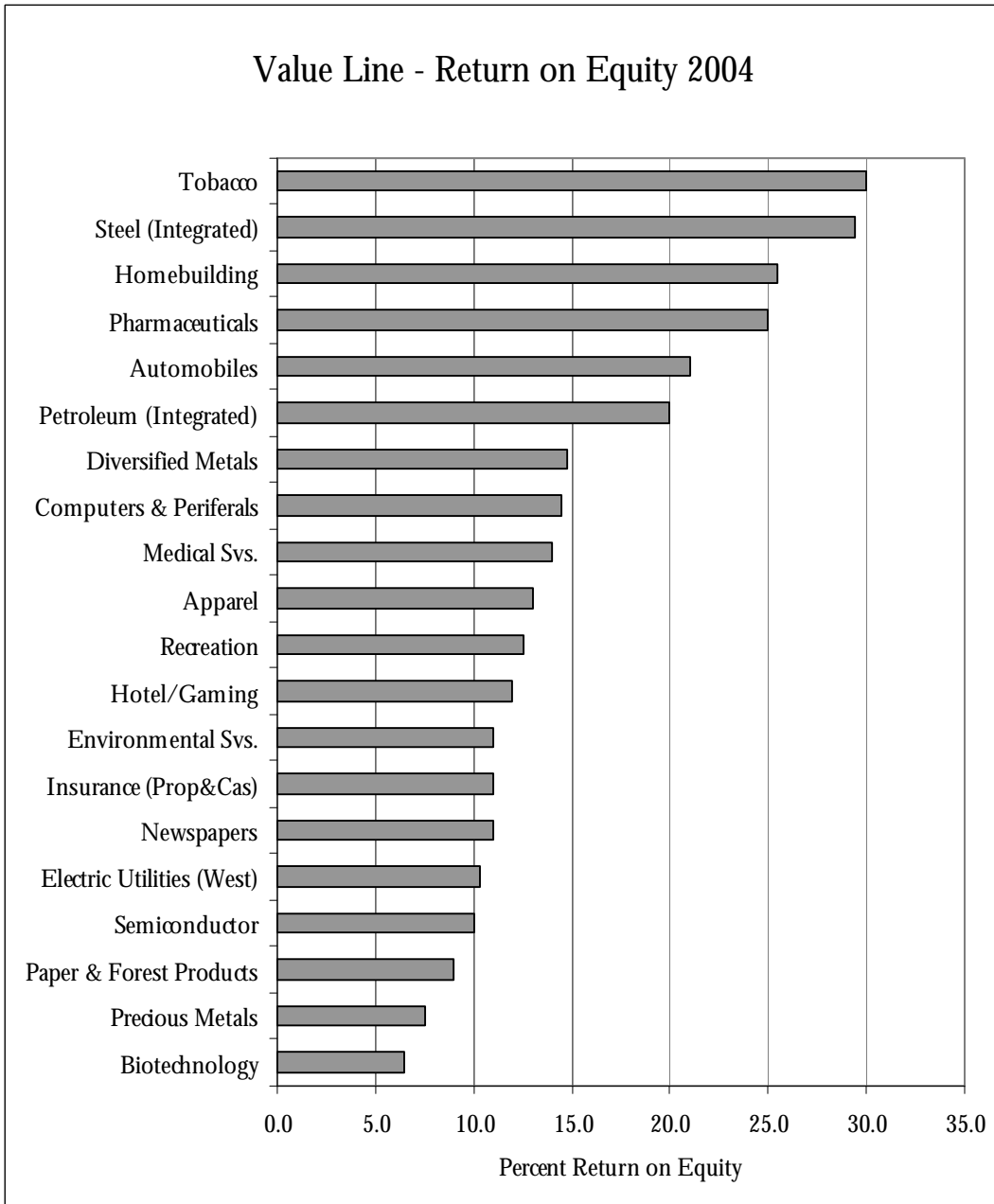
The small decline in net income in 2004 in spite of higher prices may seem to contradict this point, but it is indicative of the stage of price cycle that the industry is currently going through. As noted above, as prices rise operators process lower grade ores, some of which may have been stockpiled during periods of low prices. This raises their production costs and cuts into their net income. At the same time, companies generally increase their exploration budgets, as they have in the past two years, which also cuts into their net income. Another factor is that when prices fall, as they did in the late 1990's operators frequently delay development expenditures to conserve cash and maintain their net incomes. When prices recover, companies try to bring these delayed projects and expansions into production as soon as possible to take advantage of higher prices, but this also reduces their net income.

The latter point illustrates why streamlining the permitting process is so critical to the long-term viability of the gold mining industry in Nevada. Long lead times to get approvals for expansions and new projects reduce operators' ability to respond to price increases. Knowing this, if a company has an opportunity to develop a property offshore where it can get permits and have the mine constructed in 18 months or it can develop an identical property in Nevada where the permitting process and construction will take over five years, the offshore mine is a much more profitable investment.

Other indicators of the profitability of Nevada operators such ROE are also down slightly compared to 2003 but not significantly. This decline reflects the same factors described above.

Another basis for comparing precious metals industry profitability to other industries comes from Value Line's Investment Survey, which reports on the profitability of various industry groups using companies selected by Value Line. Value Line's group only included three of the companies used above – Newmont, Barrick and Placer Dome – and included a mutual fund with gold mining stock holdings, a Canadian producer, AngloGold and a U.S. platinum group metals mining company. Their results for the sector, however, are very similar to those shown above. Value Line's Investment Survey group of precious metals producers had a weighted average rate of ROE before write-downs of 8.0 percent in comparison to the 8.8 percent for the group of precious metals producers with Nevada interests represented on the table above.

For comparison purposes 16 of the 83 industry groups tracked by Value Line were selected more or less at random to compare with Value Line's precious metals producers and Nevada's other major industry Hotel/Gaming. These industry groups' ROE are shown in the figure below. As indicated, using either Value Line's precious metals industry group, or the group of nine Nevada producers, precious metals mining remains near the bottom of the list. As a matter of fact, tracking returns to precious metal mining over the past decade has always found them near the bottom of the list with single digit ROE's. This is because, as noted above, when prices go up operators' costs increase and they spend money on exploration and investments.



NEVADA'S MINERALS INDUSTRY OUTLOOK

The outlook for Nevada's minerals industry is clearly brighter with \$400 gold than the \$250 gold that we saw in 1999. The resulting expansion of exploration activity in the state and the growth in reserves are clearly important for sustaining the industry in the future.

The industry developments described above clearly show that Nevada's minerals industry remains a major player in the world gold industry. Moreover its large reserve base and existing capital investment make it likely that it will remain a major player for the foreseeable future. Notwithstanding this point, the industry faces numerous technical, environmental and regulatory challenges in the years ahead.

From a technical perspective, as indicated above, increasing proportions of Nevada's production is coming from underground operations. This trend will clearly continue as the industry matures as near surface orebodies that can be mined with open pit techniques are exhausted. This will obviously require different production techniques, new equipment, and the need for continued labor force training. This development will also tend to drive up production costs.

On the environmental front, the industry must continue to work with federal and state regulators and citizen groups to ensure that mining activities continue to have minimal environmental impacts and, when possible, improve environmental conditions for wildlife and other land users. These improved environmental conditions can come from improved reclamation techniques, reclamation of abandoned mines, and other on-going efforts.

One such recent effort is the voluntary reduction of mercury emissions from ore processing facilities in the state. Through a partnership with the Nevada Division of Environmental Protection and the U.S. Environmental Protection Agency the industry has achieved an 87 percent reduction in these emissions over the past four years and has plans that will achieve further reductions in the future.

Another challenge facing the industry comes from cost increases. Increases in energy prices have hit operators particularly hard. As noted above, mines are large consumers of electricity for operating milling equipment, pumping water, and other purposes and large consumers of petroleum products for operating equipment such as haul trucks and shovels.

In 2004 two of Nevada's major producers, Barrick Gold and Newmont Mining, announced plans to construct electrical generating plants in an effort to ensure supplies and control costs. This not only benefits these companies, it provides a valuable investment and industrial and commercial infrastructure for the region.

Another source of rising operating costs has been the large increase in the industry's workforce in the last two years. It was noted at the beginning of this report that this is a good problem to have, however, the 33 percent increase in industry employment in 2004 over 2003 has made it difficult to find new workers, retain the existing workforce and train entrants into the workforce.

While the past few years have been challenging for the Nevada mining industry, the state continues to offer a number of positive characteristics which should bode well for mining, especially gold mining, even with a modest rebound in commodity prices. Nevada has geologic conditions that are favorable for the occurrence of outstanding mineral deposits; the industry has developed a skilled workforce; infrastructure and support services are in place, and; the state has maintained a reasonable business environment in which responsible mining can take place.