Current Considerations in Gold and Silver Mining in the United States

by D.A. Jones

Gold Mining History

The current gold rush (1984-1985) is the 5th in the 209 year history of the U.S. The first commercial mining was of placer deposits in the southeastern states in 1799. The California rush of 1848 made the U.S. a major producer with 2 million oz. of output by 1850 and 3 million oz. by 1853, accounting for 63% of the world production.

The richest placers were soon depleted and by the end of the Civil War production had dropped to below 2 million oz. The government then relaxed prices and the industry began to recover. The 1870's and 1880's saw the development of the great mines of the California Mother Lode and Grass Valley areas followed by the development of the Comstock mine at Virginia City, Nevada which became one of the worlds largest producers of Gold and Silver.

Discovery of the Cripple Creek district in 1892 and the development of large dredges in the California placers resulted in substantial production increases.

Expansion of the Homestake mine at Lead, S.D. in 1898, caused U.S. output again to rise above the 3 million oz. level. In 1905 production climbed above 4 million oz. due to the addition of Alaskan gold and the newly opened mines at Goldfield, Nevada.

During World War I the government forced the shutdown of the mines and by 1920 annual production had dropped to nearly 2 million oz. Many mines remained closed until the Depression. With the devaluation of the dollar in 1934 the price of Gold increased to approximately 35 dollars per oz. This was the beginning of the 4th gold rush. By 1937 production had again surpassed 4 million oz.

This was a short-lived period because Executive Order L-208 in 1942 again closed most of the mines. By the end of World War II production had fallen below 1 million oz. for the first time in almost 100 years.

The number of gold mining companies continued to decline until by 1956 the Homestake was the only primary producer remaining in operation. U.S. production has remained under 2 million oz. since shortly after World War II.

In 1969, the U.S. devalued the dollar. Over the next 4 years this action resulted in deregulation of the price of gold and a rebirth of the U.S. gold mining industry. The extreme inflation of the 1970's caused a dramatic increase in the prices of precious metals and an increase in exploration and mining continues.

The enthusiasm began with the few remaining producers who had survived on marginal profits during the years of fixed prices and ever increasing costs. Newcomers appeared on the scene who saw an opportunity to enter the industry that had historically been characterized by small operators with low capital costs. In the later 1970's some of the larger mining companies recognized that investment in smaller gold projects could generate cash flows previously associated only with so-called world class deposits.

you bet!

Today gold and silver has such tremendous appeal for the entire minig community in spite of price drops in 1980-1981 that major firms in and outside the U.S. even with no previous mining experience are attempting to gain a foothold in gold and silver mining inside the United States.

How easy is it to enter the U.S. gold mining industry?

What are the basic factors that influence the economics? What are they likely to be for the remainder of the decade?

How has the industry changed and what is the composition of the active companies?

To date, gold has been produced from more than 500 mining districts in at least 25 states for an estimated cumulative production of over 322 million oz. Lode gold has accounted for about 50% of the total production, placers 35%, byproduct production about 15%.

Source relationships have changed substantially in recent years. Lode mines now account for approximately 70% with placers at less than 1% and the remainder from by-product production primarily from the copper industry.

The current depression of the copper industry brought about by large inventories of copper at low prices worldwide suggests that byproduct gold production will continue to decline although Kennecott Minerals is currently considering a 100,000 ton per day C.I.P. circuit at the Bingham Canyon Mine to treat ore containing 0.15 oz. per ton gold. Increased placer production is not foreseen.

The general concensus among those who follow the precious metals mining business is that the surviving companies will be those that can discover and/or develop new lode deposits. The need to focus on these deposits became readily apparent to most entrants into the U.S. precious metals industry during the last decade.

Industry analysts expect that the firms meeting the greatest success will be those who can make major grass-roots discoveries such as Paradise Peak, Jerritt Canyon and Mesquite. It is believed the continuing exploratory efforts will result in discovering additional fault related Carlin-type deposits and deposits similar to those of the California Mother Lode and Kirkland-Larder Lake Break and also sedementary-exhalative type deposits and newly recognized deposit types as those of the Hemlo and McLaughlin discoveries.

Many examples abound of large established mining firms rejecting newly discovered prospects out of hand only to have newer entrepreneurial groups come in and establish a successful operation on these deposits. Companies too inflexible to adjust to the current conditions in the industry may become history themselves.

The Political Environment

The political impact on the U.S. precious metals industry can be divided into two components: international and internal. The two are intimately related but each can have dramatically different influences on the U.S. gold industry.

World political events such as inflation, recessions, budget deficits, devaluation, and military actions have historically caused international populations to seek secure financial havens. Gold and silver have long been regarded as a means to preserve wealth during international crisis.

The U.S. has been regarded as having a stable political climate compared to most other countries having minable deposits. International investors intent on preserving wealth are seeking investments in gold and silver mining operations in the U.S. resulting in sources of capital not generally available to other nations.

Concern over the political stability in South Africa is causing mining and investment firms to invest an increasing portion of available capital in the U.S. (e.g., the Minorco Group).

A number of firms have been successful in developing new gold mines since 1970. They have been fortunate enough to discover reserves in "nonsensitive" areas or have applied modern technology to lessen the potential negative impact of mining and processing. Future operations will be influenced by successfully dealing with technical, political, and environmental questions and issues.

The financial environment and access to capital impact on the structure and composition of firms in the precious metals industry. Historically gold and silver production in the U.S. has been heavily financed by both foreign and domestic capital and the sources of funds have been more diverse than for any other commodities. The U.S. has provided diverse capital markets which have in turn, aided in the transfer of capital, thus funding for precious metals mining ventures has been relatively easy compared to most other countries.

At the turn of the century the principal money markets were in Boston, Philadelphia, and New York. Today, the major stock exchanges used in obtaining speculative capital for mining ventures have shifted to Vancouver and Toronto and to a lesser extent to U.S. over-the-counter markets in Denver and Spokane.

Large U.S. mining companies continue to use the equities market to raise capital as in the case of Homestake's three million-share stock offering which raised the $87 million needed to develop the McLaughlin project.

The smaller mining companies, however find the stock exchanges yield the largest portion of investment capital for both exploration and development. Offerings have been used to raise amounts from less than $500,000 to more than $40,000,000. In 1983, for example, there were more than 250 new public offerings on the Vancouver exchange alone.

Within the category of private financing there are several types of financing sources:

- private placements
- personal loans
- purchase agreements
- cash flow financing
- joint venture agreements
- commodity-indexed bonds

These sources of funds are theoretically available to firms of any size but smaller companies have made greater use of private placements, personal loans, and commodity-indexed bonds. Larger companies have tended toward cash-flow financing, joint venture agreements, and purchase agreements.

In the mid-to-late 1960's the mining industry generally looked askance at individuals who projected the decontrol of gold prices. Aside from the great Homestake Mine and the recently discovered Carlin Mine, no significant primary gold production existed in the U.S.

The first indication of a relaxation in gold prices caused a sign of relief from existing producers but attracted very little exploration attention. When it was announced in 1973 that gold prices would be determined by the market, price projections remained low. Few mining companies developed significant exploration programs and many had no real experience in the search for, or production of gold.

Increased gold prices did attract a new element to the U.S. scene - the Canadian junior company. Most of the old time U.S. firms looked upon these "juniors" with some reservation. They focused not on the aspects of the "juniors" activities, but rather on the promotional nature of many of the companies. This contributed to the late entry of many U.S. companies. Few of the better known organizations wanted to be associated with the possible implication of promotionalism.

Most of the major mining companies had another problem, a concept that "bigger is better" had developed and the term "world class deposit" was coined. Multi-million cash flows were perceived to cover the overhead of a company in the process of developing a "smaller" gold mine. Then came the entry of the major oil companies and there was a reluctance to become involved in a smaller monomineral deposit when the great copper porphyrys offered diversification by means of their polymetallic composition.

By 1980 things had changed. Inflation was considered out of control. World money frantically sought safety in commodities, predominantly gold. As prices for other commodities began to falter, gold prevailed. This helped more mining companies find the necessary "rationale" to join the rush.

By late 1983 the list of companies exploring for gold and silver in the U.S. numbered between two and three hundred. Metals Economics Group recently published a tabulation of 164 U.S. mining projects that were in some form of development including 111 gold and 33 silver projects. This is an impressive number. It's significance is questionable in terms of impact on U.S. output.

The total U.S. gold production in 1983 was approximately 1.6 million oz. Six firms account for nearly 70% of the U.S. production and 12 primary gold producers account for over 75%. The addition of Kennecott byproduct production raises the total to 89% of 1983 U.S. gold production.

The larger companies tend to regard declines in current gold prices as windows of opportunity to acquire reserves and production. It is likely that this scenario may eventually account for increased concentration in the industry and the ability of larger companies to control the bigger deposits.

U.S. gold reserves have a weighted average grade of about one-half that of the rest of the Western World ((0.8 oz. per ton U.S. vs. 0.16 per ton W. World). The largest portion of the lowest grade reserves exist as byproduct production from porphyry copper deposits. These may never be produced if these operations are closed due to a prolonged period of low copper and molybdenum prices.

Summary

A review of ownership patterns of U.S. gold producers indicates that major foreig elements will continue to play a significant role in the industry. The Minorco Group, with more than $1,000,000,000 invested in North American companies (with ultimate ties to Harry Oppenheimer), is likely to dominate foreign investment in the U.S. gold industry.

The Canadian junior companies will continue to play a major role in developing exploration capital and in providing development funds to the small mines sector of the industry.

The firms that have been successful are those that have had the ability to search out and subsequently control ore reserves.

The biological environment is an important consideration both with respect to it' impact on the physical environment and the technilogical environment. It must be considered in the search for and the production of reserves.

Those firms best able to take advantage of the physical environment of the U.S. gold industry need to also understand it's financial environment. Financing for U.S. gold mining projects has been and will continue to be available from many sources.

A decade after the return of the U.S. precious metals industry, a structure is clearly emerging. While opportunities will continue to exist for junior mining companies, three to five majors are likely to dominate the scene by 1990, these are not the companies that were regarded as being the leaders in 1970. It will be interestinc to see which ones can eventually diversify as base metal prices recover.

Ownership of the U.S. industry may be heavily influenced, if not controlled outright by foreign entities. This control may be exercised through large conglomerate mining houses or by large foreign institutional investors and wealthy individuals. Management is likely to remain in the hands of U.S. - trained professionals who understand the increasingly complex structure of the industry.

References: Metals Economics Group, 1983, Mine Development Bimonthly, October 17
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Mining Engineering December 1984 Hillman, Williams, Dohms & Williams

The Silver Bell Group

The Red Bell, Blue Bell, Silver Bell Complex of some 600 acres of unpatented mining claims are situated in the Missippian and Cambrian formations in the Wasatch Mountains east of Salt Lake City, Utah.

The property is in an area of complex faulting and thrusting and contains gold, silver, lead, zinc, and other minerals in varying amounts in several locations.

An original group of 10 claims were located (claimed) by Aurora Mining Company (a now defunct Utah partnership) in 1959. They were acquired by D.A. Jones & Associates, a sole proprietorship, in 1965 and the property was subsequently increased to it's present acreage by the latter.

D.A. Jones has improved the road, erected a surface plant, and equiped that plant and the Silver Bell level, (the primary development tunnel) with materials and equipment necessary to continue advancing the level into an orezone beneath a thrust fault in the property.

An operating group in the form of a limited partnership has been proposed to do the necessary additional development work and handle the anticipated ore production. Proposed members of the proposed limited partnership have been assisting on the property in an informal way for some time and it is anticipated that the limited partnership or a corporation will be formalized in 1985.