THE NEW MINING BOOM

George White

The title of this paper should perhaps have been "The New Mining Boom - Fact or Fiction". I say this because there are a growing number of factors which may prevent a resurgence of mining in Victoria. That may be poetry to the ears of many of you but I believe that all facets of Victorian life will lose significant benefits if mining doesn't expand.

MINISTRY OF PLANNING IN VICTORIA

To appreciate the potential for new development, the history and scale of mining in central Victoria is an essential backdrop. For central Victoria, mining effectively means goldmining, with Victoria having produced nearly 80 million ounces of gold. Gold had been found prior to 1850 but the major discoveries were made in 1851 following the offer of a reward by the Government. Clunes was the first significant discovery but the exceptionally rich fields of Bendigo and Ballarat followed soon after. Gold bearing quartz reefs were found beneath many of the early alluvial fields and working of these began in Bendigo in 1853 following the installation of a state battery.

Annual production reached a peak in 1856, of over 3 million ounces and remained at over 1 million ounces until 1876. Between 1876 and 1910 production ranged between 600,000 and 900,000 ounces but declined very rapidly subsequently, with only a minor revival in the late 1930's and early 1940's.

Underground mines, which account for 40% of Victoria's total gold production, are estimated at between 6,500 and 7,000 in number. However, 68% of underground production came from mines that produced over 1 tonne of gold and these numbered 164; of these, 85 were in Bendigo. The average grade of these significant mines was approximately 15 grammes per tonne.

Alluvial gold accounts for 60% of Victoria's gold production and includes both shallow alluvials and deep leads. Shallow alluvial deposits were prominent in Ballarat, Castlemaine, Bendigo, Donolly, Moliagul, Wedderburn, Tarnagulla and Inglewood. Deep leads, which are buried alluvials, were well developed in the Avoca and Loddon Valleys, at Ballarat and at Chiltern-Rutherglen with the best development in the area north of Creswick in the Loddon Valley.

Bendigo was one of the premier goldmining centres in the world with several of its mines, at various stages, boasting the deepest shaft in the world and in terms of production was the second largest goldfield in Australia and the seventh largest in the world outside of the huge South African fields.

The first significant quartz reefs were worked on the New Chum line, and the Hustler's line of reef. Operations soon spread to other lines of reef until work was going on over the whole field.

The Hustlers and New Chum reefs were worked first as open cut mines because of their surface outcroppings of quartz. However, it soon became apparent to the early miners that the outcrops of quartz reefs occurred along definite parallel lines and that these lines coincided with the centres of folds in the rocks. With the subsequent recognition of the form of the reefs, and the occurrence of these reefs one below the other, the exploration of the "centre country" of these folds became the essential feature of mining in the area.

During its heyday in the early 1870's, 1300 mines worked the Bendigo reefs with some (like the Victoria Quartz and New Chum Railway) eventually reaching depths of over 4,000 feet. By the early 1900's, a general decline had set in. Many of the remaining mining companies had begun to get into difficulties because of the problems associated with the increasing depth of mines, small sizes of leases, problems of having to cope with large amounts of water, absence of ventilation and poor mechanical efficiency. Increasing costs and wages and the fixed price of gold during and after the First World War also contributed to this decline.

Mining was given a small boost in the 1930's with the higher price of gold and the discovery of significant new reefs on the Deborah line. Over 40 mines operated in the 1930's and some 30 cyaniding plants reworked the old tailings. This revival however, was short-lived and the final closure of the Central and North Deborah mines in November 1954 ended over 100 years of successful mining in Bendigo with the total production of gold having exceeded twenty-two million ounces. The enormity of the mining in Bendigo over this period is attested to by the fact that between 1936 and 1954, an estimated 500 shafts had been capped with concrete and a further 5,000 filled in. Many of the major shafts are today beneath the Bendigo urban area.

WILL MINING RETURN TO VICTORIA?

Interest in mining has returned to Victoria because of the increased price of gold which has held well for some time and until recently, because of a very favourable exchange rate. Victoria is also attractive because of the historical lack of effective exploration and the fact that the majority of the gold was won prior to the turn of the century - before modern mining and extraction techniques were available.
I raised the question earlier as to whether the "New Mining Boom" was fact or fiction, as to date very little mining has actually occurred. The perception of a resurgence in mining can be attributed to the following groups:

1. "Real Estators"
2. Individuals
3. Small mining companies
4. Large mining companies and
5. Exploration by any of the above.

The two largest causes of the high profile of mining are the actions of the first and last on the list. The price of gold and the ready availability of money via the Stock Market led to an enormous amount of land being pegged under mining titles, often with the sole purpose of "Real Estating". Fortunately the Stock Market crash has largely put an end to this, but the land remains pegged. Exploration in general is the second factor involved. Resources are not located in readily identifiable situations and must be explored for. This is the proverbial searching for a needle in a haystack - but you will never find the needle unless you first have the haystack. Most of the land held under mining title is for exploration purposes and on average (and this is a worldwide statistic) only one in every 1000 prospects will ever develop into a mine. Much of the area pegged by the "Real Estators" does not even rate as a prospect so in reality far less that 1 in 1000 areas held will ever result in a mine.

To date the number of operators who have found the elusive "needle" are very few although there are a number that believe they have. Finding a potential mine depends on the geological prospectivity of the area and there is no doubt that many parts of central Victoria possess just that prospectivity. However, transfer of these geological prospects into a viable mining operation will depend on economics and the regulatory environment.

Although the gold price in U.S. dollars has been relatively stable, because of the exchange rate, the price in Australian dollars has dropped from about $650 to $550 over the last six months. This obviously will make all potential projects less profitable and may be sufficient to eliminate some prospects from consideration. The other unfavourable factor recently imposed on the industry was the decision in the May Economic Statement to impose corporate taxation on the gold industry from January 1, 1991 rather than continue the present system of taxing gold mining profits in the hands of the shareholder. If this does occur then many further projects will be shelved. The industry however, is striving to have this decision reversed, not only to protect this major growth sector, but also to ensure Government continues to benefit from the industry, as there is no doubt that the discontinuence of the current tax regime would result in less money into Government funds.

Economic factors are international or national in character whereas the regulatory environment is very much a State and local level factor and has the potential to stifle development. Until 1984 Victoria had produced more gold than any other Australian State. Today it produces little more than 1% of the national total. Whilst Western Australia, Queensland and the Northern Territory have taken great leaps forward, Victoria, which has just as great a potential, has stagnated. This can almost totally be attributed to the legislative constraints and unless changes are made in the near future, may lead to Victoria missing this opportunity to benefit...
in the same way that other States have.

In April 1987 in the State Government publication "Victoria - The Next Decade" the following was of particular relevance to gold:–

The Government will facilitate increased development of the goldmining industry in Victoria by introducing a package of initiatives. The package will include identification of constraints to the development of the goldmining industry and development of a package of proposals to assist the industry.

A detailed package of initiatives will be released by 30 November, 1987.

This would clearly indicate that the Government supports the industry. Unfortunately this support does not flow on in terms of both community appreciation and in current legislation.

Despite apparent Government support, the legislative process seems designed to frustrate any development. Neither Government nor the public appear to appreciate the cost of the delays in the current system. Mining is unlike most other industries where delay before commitment may be frustrating but not necessarily costly. With mining, a great deal of money has already been spent during exploration before a commitment is made and any delay in effecting a return on that investment is costly and in extreme could turn the whole process from an otherwise profitable venture into a financial failure.

As an example, at Bendigo, Western Mining Corporation (W.M.C.) had spent $7 million on surface exploration before deciding to continue that exploration underground. Nearly 12 months passed before underground work started and the cost to W.M.C. of the previous expenditure was close to $100,000 for each month of delay. A further 12 months delay has occurred during the production and processing of an Environment Effects Statement (E.E.S.) and forseeable delays could add yet another 12 months. Time delays at this stage of the project after expending in the order of $17 million, are costing over $250,000 per month. Any public company has an obligation to its shareholders who may well ask in light of the above, whether the exploration dollar should be spent in Victoria.

The initiatives by the State Government mentioned above are still awaited and we have had the negative effect of the new Planning and Environment Act, the introduction of which has caused further delays.

The whole process of obtaining approvals for mining is one of multiple advertising and potential appeal, dual and multiple control and often an unawareness by authorities of their own legislation, regulations and procedures. As an example of multiple control, in terms of the interests of this conference, three organisations have an interest in the archaeological aspects of the W.M.C. Bendigo project - Conservation, Forest and Lands Historic Places Branch, Ministry for Planning and Environment Heritage Branch and the Victorian Archaeological Survey. As far as W.M.C. is concerned, the process is further compounded at Bendigo as the project involves four councils and a Regional Planning Authority.

In total 14 separate organisation have been directly involved in the approvals process for our Bendigo project; and several others have needed to be consulted. These groups, together with private landowners have resulted in over 75 approvals or agreements. At the end of the current E.E.S. process, one would imagine we would be free to proceed within the framework laid down as a result of that process. Unfortunately this is not so - we will still need further approvals from the EPA., R.W.C, C.FL. and the four Councils with further advertising and opportunity for appeal. It is not surprising that the local newspaper made the following statement: "Despite a decade of effort, the project is still grinding its way slowly through the bureaucratic morass."

Based on the experience of the mining industry in other parts of Australia, the most efficient method of management for the exploitation of minerals, is under the supervision of a single authority. The re-establishment of a strong Mines Department with adequate resources would provide the mining industry with an expeditious system for mining titles and a competent mining supervision process and would also provide the public with confidence that mining is being supervised by a professional, efficient body in the interest of the State and with adequate protection for the community in general.

The industry is currently trying to establish a sound base during favourable conditions, so that it can become a long term industry that not only helps earn export income but ensures long term prosperity for the communities within which it develops. The announcement of the application of company tax to goldmining in 1991 makes it even more vital that legislative conditions conducive to establishing our industry in the short term, are improved as rapidly as possible.
THE EFFECTS OF MINING

There is no doubt that some further mining will develop in Victoria and its effects will be both economic and environmental. Whereas the style of mining will have little impact on the economic effects, it can pose quite varied environmental problems.

Environmental Effects

Basically mining can be divided into alluvial, opencut and underground. Alluvial mining tends to be the province of the small company or individual and because it generally involves thin payable zones, it often results in fairly large areas of land being distributed. This may have serious consequences on biological grounds but with modern progressive rehabilitation techniques does not have to result in long term effects. In terms of heritage values modern alluvials will often be the site of previous workings from the last century. Fortunately very large areas of Victoria were worked last century and the familiar hummocky ground is well preserved in many places. The limited mining of these alluvials that will take place today will still leave the vast majority of examples for posterity. Apart from the state of the ground, alluvial worked areas seldom had other substantial artifacts of heritage significance.

Opencut operations are a favoured method of working near-surface deposits because of advantageous economic factors. The style of gold mineralization in Victoria and its now close association with settled areas generally do not favour this form of development, but Victoria could see half a dozen open pits in the next few years. Although these operations are relatively restricted in area they may occur in previously mined areas as we see currently at Stawell and Maldon. In these instances some artifacts of heritage value may be lost although to date none of significance have been lost at Stawell or Maldon.

The bulk of mining in Victoria is likely to be underground which has even more limited effect on the surface. Like developments in other States the bulk of the new activity is around previous mines and therefore has the potential to impact on heritage values. Fortunately as I referred to earlier there were many thousands of shafts worked in Victoria and a significant percentage of these still exhibit good examples of the building and equipment footings. Generally new development at an old shaft will involve destroying the wider foundations although this is not always so. In fact in the case of W.M.C. in Bendigo, in only one of three shafts operating or proposed, have the footings been lost.

Economic Effects

The first development of Victoria’s mining industry ensured that towards the end of last century, Australia had the greatest per capita income in the world. The wealth generated by mining was largely responsible for the development of many country centres, much of Melbourne and a great deal of the State’s road and rail systems. It also formed the basis of Victoria’s engineering industry, and because much of central Victoria was recognised as being potentially auriferous it was protected from subdivision giving present day Victoria the benefit of many tracts of forests which would otherwise have been cleared. In Bendigo we see many fine examples of the material benefits of mining in the form of Fortuna Villa, the Post Office, the Shamrock Hotel and many other fine buildings.

If there is a new phase of mining in Victoria it will not usher in such impressive developments as the initial phase, but it will have a significant effect on our society. The most noticeable effect of course will be employment, which is especially important in these country centres, and the resultant economic boost flowing from employment and spending in the district. Service industries will benefit from the flow-on effect and in particular we can expect a revitalization of the engineering industry. As most of Australia’s gold is exported this will further assist in reducing the balance of payments deficit, and at home the Government will benefit from the considerably increased taxes that will be generated.

CONCLUSION

Heritage is the reason for this conference and it is a responsibility of all of us to conserve important and representative artifacts of our past. It is also important to create artifacts for future generations. During my exposure to archaeology at university one of the aspects that appeared to make one site more interesting than another was continuity of occupation. Not only does that have historical and sociological importance but in the modern context the interest of the public in the historic relics is enhanced and not degraded if a modern example exists alongside. Much of central Victoria and especially Bendigo has a wonderful opportunity to benefit from this association. Although some relics may be lost it is just that threat which has at last raised enough interest so that many of the excellent examples of heritage will now be documented and protected by organisations such as yourselves, Government agencies and mining companies - for these relics are meaningless piles of rubble without the knowledge to place them in context.