

# The ANZAC minerals industry - What future?

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## Abstract

The importance of the minerals industry to any economy is clearly demonstrable. Its raw materials and products are the foundation of modern society and they have shaped the history of mankind from prehistoric times to the space age of today. However, those in the minerals industry have clearly failed to impress this fact on the consciousness of the public, bureaucrats and politicians. They have also failed to engage their dedicated opponents in a constructive debate. This is mainly because the minerals industry has been unwilling (until recently) to deal with the “soft” issues of civil society, nor understand and operate on a more emotional level. Technical professionals (as well as managers) in the future must be as comfortable in handling community concerns over social, environmental or landowner issues, as they are with logging complex drill core, designing blast patterns and separating one mineral from another. They must become caring, effective communicators and mediators. These are the new skills of a professional in the Third Millennium. These issues are outlined and discussed with some Australian data used to illustrate the point. If there is to be a future for all, then the policy makers within all levels of government (national, regional or local) must not drive essential mineral development offshore. They must address ways to support wealth creation mechanisms, particularly innovation. The minerals industry is a powerful wealth creator for ordinary citizens and an innovator. Politicians and their advisers must not be allowed to forget this fact. If the ANZAC minerals industries do not win the emotional debate and successfully deal with the “soft” issues as well as they deal with the technical issues, there can be only a dim future ahead.

## Introduction

In 1999 The Australasian Institute of Mining and Metallurgy (AusIMM), which is the body that represents most minerals industry professionals<sup>1</sup> in Australia and New Zealand, became a member of the Australian Council of Professions (ACP). The ACP is the umbrella authority<sup>2</sup>, nationally recognised by government and the community, responsible for the maintenance of professional ideals, conduct, standards and practice. It has an active voice on matters of national development, regulation and education and it is mandated to address other issues of common professional concern.

The ACP defines a profession as:

“a disciplined group of individuals who adhere to ethical standards and uphold themselves to, and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to exercise this knowledge and these skills in the interests of others.”

Thus, mineral industry professionals:

- each practices a relevant profession within the industry, according to a strict Code of Ethics, supervised by a committee empowered to enforce that Code, working only in their area of competence and making statements only in an objective, truthful manner and on the basis of adequate knowledge;
- practice their professions in the service and interest of the wider community, to enhance the honour, integrity and dignity of the relevant professions, by placing the welfare, health and safety of the community at all times before the

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<sup>1</sup> Geologists, mining engineers, metallurgists and environmental scientists/engineers, who work in the exploration and mining and mineral processing industries (collectively the minerals industry).

<sup>2</sup> This body now consists of 13 of the key national professional organisations representing the major professions in Australia (e.g. minerals industry professionals, accountants, engineers, doctors, dentists, physiotherapists, architects, surveyors, pharmacists, physiotherapists, vets, actuaries and quantity surveyors).

interest of the profession, of sectional or private interests, or of other members;

- agree to comply with all laws and government regulations in all countries in which they work, and to follow relevant codes of best professional practice eg, in the reporting of Resources/Reserves (JORC Code<sup>3</sup>) and in the assessment and/or valuation of mineral and petroleum assets and securities (VALMIN Code<sup>4</sup>); and
- undertake professional development and continuing education throughout their careers and actively assist and encourage any professionals under their direction to advance their knowledge and experience.

Thus, one would expect that these professionals would be perfect transmitters to the community of the general benefits of mining, despite the current downturn in mineral commodity prices and enterprise profitability, with its concomitant adverse employment prospects for those that work in and service the minerals industry sector. Surely, the community is aware that such professionals have undertaken these ethical commitments.

## Reality check

However, the minerals industry is still poorly perceived by the community today despite its considerable efforts to improve its image. In the main, people do not (and do not want to) appreciate how important mining is to their economy. They naively believe that their lives would improve if explorers and miners went somewhere else to conduct their activities (the well known NIMBY<sup>5</sup> Position). Perhaps it would be better if the industry's television advertising showed less images of dramatic, destructive open pit blasts and fewer huge impersonal machines that make people look insignificant, penetrating and devouring the earth. The mainstream media do not help, preferring negative stories to those showing community acceptance and environmental success. So, the mineral industry's image continues to be one of a raper-pillager-and-burner of the countryside, irreparably damaging the environment and the local communities, despite it being untrue after any objective analysis. Perhaps that is the answer – it is a debate not to be won on the intellectual but the emotional level. Thus, minerals professionals are now ranked way down the list of liked occupations alongside used car dealers, politicians, media proprietors and snake oil salesmen. Even being a dentist looks a better career choice for ones' children.

If the minerals that our technological society consumes (since not everyone is happy to go back to living in mud huts) are not produced domestically, how is the cost of import replacement to be paid for, except by higher taxes? How does one compensate for the significant lost general contribution to the Balance of Payments and Gross Domestic Product? Who makes up the shortfall in tax and governmental charges? All of YOU will!

However, it is rather pointless quoting mind-numbing statistics about how important mining is to a country's well being, because most listeners simply turn off. It is a problem for someone else, some other time, preferably somewhere else.

Besides, there is always the distraction of a sporting/social activity scheduled for the coming weekend. The short term rather than the strategic long view is becoming far too prevalent in the minds of our nations' policymakers. Mineral and Energy must return to being a priority ministry.

We must learn how the Quarry Industry has re-made itself. Few assign the providers of construction materials and many non-metallic minerals with the epithet 'miners', with all its associated negative baggage. Somehow, quarrying is not seen as exploitative. This may be because its products (sand, aggregate, bricks, tiles and cement; diatomaceous earth, fertiliser and granite/marble decorative stone) are cheap and easily accessible to the public. They are more commonly utilised in their daily lives than the smelted and refined metals of copper, lead, zinc, iron, nickel and aluminium. Perhaps, instead of exporting the raw product, if we valued-added more and exported the end-product, then people could better see the beneficial link between the raw minerals and the metals they use. Of course, gemstones (diamonds, sapphires and opals), as well as gold, are better placed minerals to win over the public. However, they are generally expensive and contribute to the false concept that the miners get them for nothing and rip off the consumer. Governments fail to remind their voters of the taxes and royalties paid, which can ameliorate personal tax increases.

So too with the energy sector, dominated in the minds of the public by the good oil and gas minerals, whereas coal is somehow regarded less favourably. Petrol drives vehicles and gas cooks our meals and warms us (employing few directly). No one actually sees their mining sites, often deep down on the ocean floor, or beneath a pump station on land in a remote part of the countryside. Underground coal mines are generally out of site, but they have had disasters from time to time and carry the historical baggage of pit ponies and child workers. Open cut coal mines are visible huge holes in the ground that are dug with monstrous draglines. This is not an easy image to depict favourably, despite the reality that the rehabilitated sites are usually a vast improvement on the original landscape.

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<sup>3</sup> JORC (1996). Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves, issued by the Joint Ore Reserves Committee (JORC), comprising AusIMM, Australian Institute of Geoscientists and Minerals Council of Australia, July, 19p (AusIMM: Melbourne). A revision, JORC (1999), has been prepared for incorporation into the Listing Rules of the ASX and NZSX from 1 September 1999.

<sup>4</sup> VALMIN Code (1998). Code and Guidelines for Technical Assessment and/or Valuation of Mineral and Petroleum Assets and Mineral and Petroleum Securities for Independent Expert Reports, issued by the Mineral Valuation Committee of AusIMM, February, 23p (AusIMM: Melbourne). This is a revision of the original VALMIN Code (1995). See also Lawrence (1998b) for an Aide Memoire that will assist in its interpretation.

<sup>5</sup> NIMBY stands for Not In My Back Yard. It is the emotional response to rationalising a need for something with a dislike for its consequences.

The NSW Coal Industry had a famous advertisement showing a new age young miner in overalls holding a young naked baby. What's that you ask about its relevance to promoting the image of the coal mining industry? Does it matter if techno-focussed professionals can't see the point, but the public loved it! We all need similar campaigns, but we are unlikely to get them with the current management of most of our mining houses, who are too logical and technical and shy away from advertising's emotion.

Australia and New Zealand have considerable subsoil mineral, oil and gas assets, as a proportion of total wealth per person. These assets can substantially grow and underpin wealth creation. Most importantly, this asset growth can increase in a sustainable way<sup>6</sup>. Nobody seem to care. The problem is that the minerals industry, whilst directly and indirectly employing significant numbers of people and creating further jobs elsewhere in the economy, does not have these people located in the marginal urban electorates so beloved of our politicians.

This is not helped by the growing international competition to attract the exploration and mine development dollar, whilst in Australia and New Zealand access to land and the taxation treatment of the minerals industry remain difficult. Hence, explorers and miners simply go offshore where they are welcome. The Australian experience is not yet as dramatic as that of New Zealand, where new mining projects are rare, but the shifting emphasis overseas from both countries seems inexorable. In Australia, recent data<sup>7</sup> show that local exploration fell again whilst overseas expenditure continued to rise. Overseas expenditure was some 30% of the surveyed group's total expenditure ten years ago, but now it has risen to 45%. This means that nearly NZ\$100M was not spent in the rural areas that need it most.

Whilst the benefits of globalisation are generally clear to most (despite the S11 Protest Alliance), the minerals industry is particularly sensitive to the gain and pain syndrome. Being part of the global economy means new trade opportunities and faster access to information and new technology. However, it is a very competitive and mobile scene with capital flows increasingly skittish and driven by fears of financial crisis and instability (viz the Asian meltdown two years ago, the effects of which are still rippling through world trade and commodity prices). Reaction times are quicker, financial impacts are bigger and poor government policy choices are immediately punished by the global miner, who goes elsewhere in search of a more friendly regime as noted above. Also, excessive speculative global hedge fund activity can be very counterproductive in a world economic sense, whether it be in commodity or currency markets. This is because it contributes to international market instability and uncertainty. Look at the unjustifiably low current exchange rates for both the A\$ and NZ\$.

Thus, industry bodies like The Chamber of Minerals and Energy of Western Australia, have been down beat about the future:

"The world minerals industry is continuing to experience difficulties. Prices have fallen substantially due to a range of factors, including economic turmoil, currency devaluation,

increased competition, low inflation and the activities of hedge funds. Some of the difficulties are cyclical and some improvement can be expected as the cycle turns. This recovery will be weak rather than robust"<sup>8</sup>.

PricewaterhouseCoopers' Global Energy and Mining Group paints an even more depressing picture about the trend of mining company profitability in its annual surveys of the Australian minerals<sup>9</sup> and coal<sup>10</sup> industries. Most people would be better off with their money in a Cash Management Trust account earning a no-risk 5%pa, rather than a net profit return on average assets employed of 1%pa, or 2%pa on the basis of average shareholders' funds (minerals)<sup>11</sup>. For coal, the net profit return on average shareholders' funds is a negative 8%pa, with even the ten year average being only 5%pa (coal), against 10%pa (minerals)<sup>12</sup> on the basis of average shareholders' funds. In Indonesia it was a much more attractive 8%, so guess where mining development is taking place, despite the relatively higher sovereign risk. They are simply doing more things right, if one wishes the benefits of local and foreign investments.

The future for the Australasian minerals industry depends primarily on government at all levels getting their policy settings right. The focus must be on mechanisms that support wealth creation, particularly innovation. One must mainly change the employer/employee culture and business climate. Hence, one does not have to be a rocket scientist to realise that microeconomic reform initiatives that increase productivity are critical to this process (e.g., tax, tariff and waterfront reform). So too, is encouragement of research and development, as well as education at all levels (and the author's preference for funding of students not institutions). Highly educated people are needed, because in the words of Andrew Stoeckel<sup>13</sup>:

"There are only two ways for the (mining) sector to increase profitability and hence wealth. One is to find more valuable orebodies; the other is to cut costs".

<sup>6</sup> World Bank (1998), page 4, in Stoeckel, A, 1999. "Minerals - our wealth down under", 45p (Centre for International Economics: Canberra).

<sup>7</sup> Minerals Council of Australia, 1998. "Minerals Industry '98" (PricewaterhouseCoopers: Sydney), pp 28-31.

<sup>8</sup> The Chamber of Minerals and Energy of Western Australia Inc, 1999. "Bedrock of the Economy '99, Minerals in Western Australia", April (WA Chamber: Perth), p18.

<sup>9</sup> Minerals Council of Australia, 1998. "Minerals Industry '98", 36p (PricewaterhouseCoopers: Sydney).

<sup>10</sup> NSW Minerals Council, 1998. "1997/1998 Coal Industry Survey", 12p (PricewaterhouseCoopers: Sydney).

<sup>11</sup> Minerals Council of Australia, 1998. "Minerals Industry '98" (PricewaterhouseCoopers: Sydney), pp 18-19.

<sup>12</sup> NSW Minerals Council, 1998. "1997/1998 Coal Industry Survey" (PricewaterhouseCoopers: Sydney), p2.

<sup>13</sup> Stoeckel, A, 1999. "Minerals - our wealth down under" (Centre for International Economics: Canberra), p33.

In addition, much more attention and effort must be paid to specific issues like access to land, with realistic and sensitive consideration of indigenous peoples' property rights (real and perceived). It is simply good business. There is little benefit for anyone if there are delays in mineral development approval simply because of cumbersome bureaucracies and unworkable, politically correct rules. Greater accessibility will stimulate the currently dying exploration scene, particularly for the junior explorers, which are the lifeblood of the minerals industry and a nation. It is very sad to see such entrepreneurial talent wasted through the recent move of many out of exploration and into adult videos/sex toys and other Internet "dot.com" schemes, whether in Auckland or Perth.

The same applies to the sustainability issue, where much more responsible and realistic debate must take place. The greenhouse gas and carbon tax debate is a variation on the same "green" theme. Few appreciate the catastrophic effect that inappropriate emission control measures will have on the economic well being of the average Australian or New Zealander until it is too late. We all need to focus less on options involving cutting back on energy use and concentrate more on innovative ways of cutting back on net emissions, e.g. use of tree planting programmes. It is an unfortunate fact-of-life that many competitor nations (in respect of mineral exports from Australia and New Zealand) are not subject to the same strident demands for greenhouse abatement measures.

## Conclusion

Without a vibrant exploration sector there will be inevitable harsh financial and social dislocation, especially in regional areas. Complacent city-dwellers, sipping their chardonnay/sauvignon blanc on their terraces, will not remain immune forever. Wake up out there and realise that a country needs to reduce its imports, whilst adding value to what it mines before it is exported. A country's natural mineral endowment is free, to be used constructively for the common good.

For those businesses engaged in the minerals industry to survive in the next Millennium, they must engage the whole community much more than they have done in the past. They must gain trust through greater transparency in their activities. They must provide public, unambiguous evidence of their support for absolute professional and ethical behaviour from the top to the bottom of an organisation. These are the keys to success.

Professional institutes like AusIMM have a duty and responsibility to provide a demonstrably effective self-regulatory framework for the individuals who are (or will become) those executives directing these companies' activities. The more successful the self-regulation, the less governmental involvement will be required to satisfy the demands of the increasingly influential and more legitimate "civil society"<sup>14</sup>.

The best evidence of the personal commitment to the fulfilment of relevant technical and social/moral obligations is having membership of an appropriate professional institute, because it sets appropriately high standards of education/qualifications,

experience and reputable behaviour as the basis for membership. An Institute demands a minimum level of Continuing Professional Development, as a condition of continuing membership, thus supporting this view. Finally, membership requires compliance with various ethical and best practice codes of professional behaviour. Thus, real change can only occur if there is a real change at the individual level.

In addition, such professional institutes are the best bodies to forge multinational agreements on various professional standards. These not only facilitate the global mobility of professionals, but they ensure that appropriate behaviour and standards are observed, irrespective of the jurisdiction.

Rationally, one should expect that the minerals sector will continue with modest real rates of growth, but this is not certain. It should be of real concern to policymakers that it is the services sector which is predicted to provide the best job prospects. These include financial/investment and insurance advice, communications, personal services, health and community services, and leisure, accommodation/eating facilities. Nevertheless, you first need a thriving economy to need such services.

There must be a vision of a real future for all, not just for those in the minerals industry, because many of them can (and have) easily migrated with their skills to other countries that entice and encourage mineral development projects. Policymakers within all levels of government must address ways to support wealth creation mechanisms, particularly innovation. The minerals industry is a powerful wealth creator for ordinary people and an innovator. Politicians must not be allowed to forget this fact. Tell them you know where they live! Be passionate about a real future and do not just simply expect policymakers and the public to grasp the vision because it is such a good rational, logical plan.

If the ANZAC minerals industries do not successfully deal with the "soft" issues as well as they deal with the technical issues and win the emotional debate there can be only a dim future ahead.

Finally, this is really not something "they" must totally address, as it is up to each individual to take their share of the responsibility for making sure that real change occurs in the way things are done. Businesses, public interest groups and governments are still only groups of individuals. We can make the difference - if we really want to do so!

Australia finally became regular serious contenders for the Bledisloe Cup, so anything is possible!

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<sup>14</sup> This is a term that describes the increasingly influential community-based organisations that claim to (and often do) represent society's conscience, e.g. those that presently form the political pressure groups on the environment and sustainable development.

## **Author**

MIKE LAWRENCE is a geologist who graduated with First Class Honours at the end of 1966 from the School of Applied Geology, University of New South Wales, Australia. He also gained a Graduate Diploma (Distinction) in Public Sector Management in 1985, from the University of Technology Sydney. He has been a consultant for almost all of his 33 years of professional experience, working mostly for major international resource consultancies (e.g. BRGM France and the UK Robertson Group). In 1991, together with two senior executives from Robertson Australia, they set up Minval Associates Pty Limited, based in Sydney, Australia. It specialises in independent technical audits and resource asset valuations, as well as the provision of expert witness/litigation support and mediation services. He joined The Australasian Institute of Mining and Metallurgy (AusIMM) in 1966 as a student and became a Fellow in 1976, being granted Chartered Professional Status in Geology (CPGeo) in July 1997. He has been a Councillor of AusIMM since 1991, a Vice President since 1994 and was its 1999 President. Mike is the Chairman of AusIMM's Mineral Valuation Committee and serves on its Ethics and Awards Committees.

Mike joined the Mineral Industry Consultants Association in 1989, being AusIMM Council Representative on its Board of Management, since 1991. He has been a Fellow of the UK's Institution of Mining and Metallurgy (IMM) since 1975, being a Chartered Engineer (CEng) since 1972. He has been a Fellow of the Australasian Institute of Geoscientists (AIG) since 1987.