Submission to the Economic and Development Infrastructure Committee:

Inquiry into Greenfields Mineral Exploration and Project Development in Victoria

Submission By:

Jon M. A. Hronsky (Director – Western Mining Services-Australia PL)

I am making this submission in response to an invitation to do so from Mr Neal Burgess MP, Chair of this committee.

I am a Director of a commercial company (Western Mining Services-Australia) engaged in providing high-end technical and scientific services to the Australian and global mineral exploration industry and also a Director of a junior Australian exploration company, Encounter Resources. In addition, I am heavily involved in a pro-bono capacity with research activities associated with the mineral exploration industry. My roles in this area include Chairman of the Board of Management of the Centre for Exploration Targeting (a joint venture between the University of WA and Curtin University, heavily supported by the exploration industry), Chairman of the External Advisory Committee to CSIRO’s Discovery Theme (which includes all CSIRO mineral exploration related research) of their Minerals Down Under Flagship, member of the Science Steering Committee for the Deep Exploration Technologies CRC, member of the advisory board of the ARC Core to Crust Fluid Systems COE, member of the Australian Academy of Science’s 2010 Theo Murphy Think Tank Implementation Group, member of the National Executive of the Geological Society of Australia and member of the Minerals Technical Liaison Subcommittee to the Geological Survey of Western Australia.

My submission is from the perspective of the key role that the public sector can play in supporting the mineral exploration industry through the provision of high-quality, pre-competitive geoscience information, and in particular, the opportunities to do this in a much more innovative way in the future. Therefore, my submission mainly relates to items (g) and (h) of the inquiry’s terms of reference.

The key contextual issue is that, both in Australia and globally, the mineral exploration industry is going through a major structural change in how it operates. Historically, most major mineral deposits (for example the giant gold deposits of Western Victoria) were discussed because indications of their presence were found at the surface of the Earth. However, it has now become increasingly clear that the era of finding such exposed, near-surface large mineral deposits is over and future major discoveries will made at depth or beneath veneers of concealing cover. This change is reflected in well-documented trends over the last few decades of increasing discovery costs, particularly for those very large, world-class deposits that make the greatest wealth contribution to society. The global petroleum industry successfully went through a transition from finding deposits exposed at the surface to buried ones more than a hundred years ago and there is no reason to think that the mineral exploration industry cannot emulate this. However, this successful transition cannot occur by simply applying the same methods that we have used in the past – we need new and innovative ways of doing mineral exploration. Furthermore, Australia has large tracts of prospective covered terranes that have not yet been explored or have only been explored very superficially. This is certainly true of Victoria, where it is interpreted that the Victorian gold fields are likely to extend under the cover of the Murray Basin.

The critical first step in mineral exploration is selecting an area in which to focus expensive follow-up exploration activities such as drilling. In covered terranes, this area selection
decision becomes even more important as the cost of detailed exploration is much greater than for exposed regions. It has been long recognised by Australian governments (both Federal and State) that by providing critical regional-scale geoscientific data-sets to the industry, the industry can (and has been) encouraged to invest in exploration where this would otherwise not occur. These regional data sets (commonly geological mapping, aeromagnetic surveys and gravity surveys) provide the key frame-work for exploration companies to make those critical area selection decisions discussed above. These government provided geoscientific data are commonly described as “pre-competitive” data, reflecting a) the fact that competitive commercial activities only commence when these data are available (and largely reflect the application of innovative concepts to the interpretation of these data), and b) the fact that it is not commercially viable for any individual company to carry out some work.

Recognition, however, of the increasing demand for more innovative approaches to meet the 21st Century challenges of exploring undercover means that Government agencies will also need to be become more innovative in their provision of pre-competitive geoscientific data. In this context, I would like to refer the committee to the recommendations of the 2010 Australian Academy of Science Theo Murphy High Flyers Think Tank, which focused on the topic of “Searching the Deep Earth: The Future of Australian Resource Discovery and Utilisation”. This forum brought together many researchers, government geoscientists and exploration industry representatives to focus on what key initiatives were required to ensure continuing exploration discovery success in Australia, given the certainty that this would require methods for cost-effective exploration beneath cover.

The proceedings from this forum were formally released in January this year by Federal Minister Ferguson, who expressed very strong support on behalf of the Commonwealth government for the recommendations of this think tank. This report is available at http://www.science.org.au/events/thinktank/thinktank2010/index.html.

I believe that the recommendations of this Think Tank are directly relevant to items (g) and (h) of the terms of reference of this inquiry. I recommend that these recommendations should provide the strategic framework to guide and prioritise the efforts of the Victorian State Geological Survey in the next decade or so. Geoscience Australia, with the strong support of Minister Ferguson, has endorsed the recommendations of the Think Tank and will be actively involved in the process of implementing the recommended initiatives. In addition, the Geological Survey of Western Australia has already indicated that they intend to use the outcomes of the Think Tank to underpin their future strategic planning.

The recommendations of the Think Tank related to major six major initiatives that were designed to underpin the next century of mineral discovery in Australia and included:

- National Cover Map
- National Map of the Deep Crust and Upper Mantle
- National Distal Footprints Program
- National 4D Metallogenic Map
- National Exploration Research Network
- Education and technology Transfer Program

Geological surveys, both state and federal, have a key contribution to make to the delivery of the above initiatives. In particular, Initiatives 1 and 2 (National Cover Map and National Map of the Deep Crust and Upper Mantle) predominantly relate to the innovative collection and provision of pre-competitive geoscientific data; the traditional role of government surveys.

Before the end of the year, the Academy of Science intends to release Implementation Papers, which lay out in more detail a national view on how the above initiatives may be best achieved. It is recommended that this document be consulted by the Geological Survey of Victoria when carrying out its strategic planning.

In conclusion, there are abundant opportunities for greenfields mineral discovery in Victoria, but only if we can develop successful technologies for exploring beneath cover. Many of us in the community have been thinking about this problem for some time and the report from last
year's Academy of Science Think Tank is the most accessible and lucid distillation of this 
effort. Therefore it is strongly recommended that this report guide the deliberations of this 
committee.

Yours Sincerely,

Jon Hronsky

Dr Jon Hronsky
Western Mining Services (Australia) Pty Ltd
Suite 26/17 Prowse St
West Perth WA 6005
P: +61 (0)8 9322 4601
F: +61 (0)8 9322 4602
M: +61 (0)417 992 518
E: jon.hronsky@wesminlhc.com
W: www.wesminlhc.com