



Geoscience Australia's Comment on Draft Revised United Nations Framework Classification (UNFC) 2008 Classification of Fossil Energy and Mineral Resources and Draft Accompanying Explanatory Note

Summary

Geoscience Australia (GA) has examined the latest version of UNFC 2008 and found it to be improved and easier to understand compared to the previous versions although there are still areas which are unclear, and could benefit with explanations to ensure consistent application and the transfer of resource categories between different mineral resource systems.

Comments

GA's comments on the latest UNFC 2008 draft are as follows.

- Although the latest draft of the UNFC resource classification system is simpler than the previous versions, it is still a complex system with potential for confusion. This stems from the intention that the UNFC accommodate resource classifications designed for different purposes including:
 - Assessment of mineral resources at deposit scale to determine the commercial viability of a mining operation in the short to medium term.
 - Assessment of the longer term availability of mineral resources at national or international level.
 - Assessment of different types of mineral resources such as solid minerals and petroleum where different criteria are used for assessment.
- One illustration of potential for confusion is given by the UNFC resource class 113 where a geological category of G3 (a level of geological detail that is only suitable for an inferred resource) is not acceptable for 'Commercial Project' (i.e. 'mineral reserves') for solid mineral resource, but it is acceptable for petroleum resources. This raises possibility for confusion that a level of geological detail of G3 is acceptable for a reserve class of solid minerals.
- To minimise possible confusion and assist consistent translation of resources between different resource classification schemes, the UNFC 2008 may benefit from inclusion of the **UNFC to CRIRSCO Template mapping** presented in Figure 3-4 (with appropriate updates) as presented at the AHGE meeting 15-16 April 2008, Geneva. Other mapping templates could also be included for petroleum and selected national mineral classification schemes in an appendix which would assist the use of UNFC as a 'Rosetta Stone' to compare resources from different classifications as described under item 28, page 5 of the UNFC 2008 explanatory notes. We note that GA officers have reasonable expertise with

resource classification but it has taken us considerable effort to gain an appreciation of some of the nuances of the UNFC. Without addition of ‘Rosetta Stones’, we foresee that there will be many cases of erroneous classification in UNFC – which would be a very counter-productive outcome.

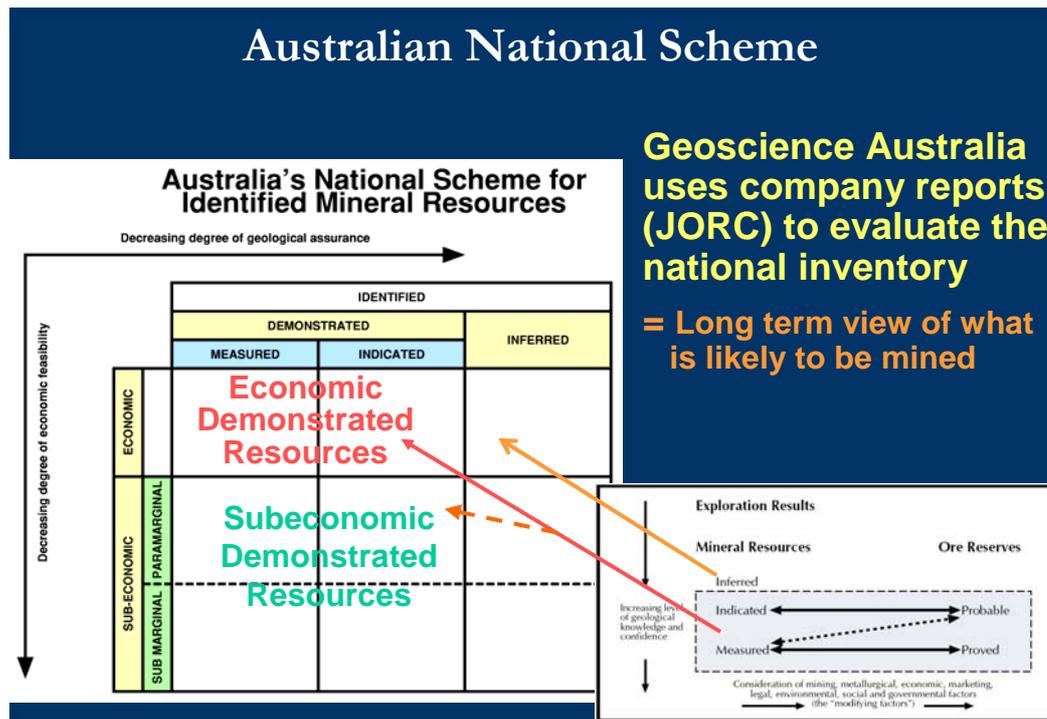
- Under previous versions of the UNFC there were sub-categories of resources called ‘marginal economic’ resources (E2.1 – resources which require modest increases in commodity prices and/or modest increases in mineral recovery technologies to make them economic), and ‘submarginal economic’ resources (E2.2 – resources requiring substantial increases in commodity prices and/or mineral recovery technologies to make these resources economic). Under the draft UNFC 2008, E2 is no longer subdivided into subcategories although in Figure 3, page 4 of UNFC E2 is still appears on two rows, one for ‘Development Pending (marginal)’ and the other for ‘Development On Hold’ due to subcategories of F into F2.1 and F2.2.
- It appears now that under the revised UNFC 2008 the previous ‘marginal economic’ (E2.1) resources remain in E2, however the ‘submarginal resources’ (E2.2) as defined under the previous version of UNFC are now largely in Non-Commercial Projects – Development Not Viable, namely E3.3;2.3;1,2,3
 - The meaning of these subcategories could be made clearer by labelling both subcategories ‘Development Pending (marginal)’ and ‘Development On Hold’ in Figure 3, page 4 of the draft UNFC 2008 as ‘Development Pending (*marginal economic*)’ and the ‘Development On Hold (*marginal economic*)’. This would minimise confusion with the classes of resources in the ‘Additional quantities in’ etc and footnote 7 on page 2 of the draft UNFC 2008.
- There is potential for additional confusion of marginal and submarginal economic resources in Figure 2, page 2 of the draft UNFC 2008 there is a compartment with the label ‘Additional quantities in place associated with known deposits’ for resource classes 341, 342, and 343; a footnote for these classes states that ‘A portion of these quantities may become recoverable in the future as commercial circumstances change or technological developments occur.’ It is not clear why are these (potentially recoverable?) resources ‘in vicinity of known deposits’ different from marginal economic resources in ‘Potentially Commercial Projects’ in E2.
- The draft UNFC 2008 may benefit from addition of the word (undiscovered) under the label ‘Potential Deposit’ in Figure 3 page 4 to make it clear that one is dealing with a deposit that has not been found.
- GA also considers that the term ‘reserves’ should be retained because it is a well established definition for mineral resources that are economic.

Concluding remarks

In GA’s view, Australia’s needs for mineral resource classification are best served at deposit scale by the existing mineral resource classification system as prepared by The Joint Ore Reserves Committee (JORC) of The Australasian Institute of Mining

and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia. The classification system is generally referred to as the 2004 JORC Code.

At the national level GA plans to continue to use the mineral resource data published by companies to compile Australia's long term national mineral resource inventory using GA's national mineral resource classification system as described in its annual publication 'Australia's Identified Mineral Resources'. The mapping of the JORC to the Australian national scheme is summarised below.



We hope that GA's comments are accepted in the constructive manner in which they are intended to the end that the UNFC 2008 can ultimately achieve its objective of becoming a useful tool at the international level for comparing mineral resources from different resource classification schemes.

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