

Trevor R. Ellis

600 Gaylord St, Denver, CO 80206-3717, USA
Tel: +1 303 399 4361 Fax: +1 303 399 3151
e-mail: ellis@minevaluation.com

6 February 2009

Charlotte Griffiths
Officer in Charge - Information Service
UN Economic Commission for Europe
Room 466, Palais des Nations
CH-1211 Geneva 10, Switzerland
By email to: reserves.energy@unece.org

Re: Draft Revised United Nations Framework Classification for Fossil Energy and Mineral Resources 2008 (UNFC-2008)

Thank you for allowing me the opportunity to review the Draft UNFC-2008. Due to schedules and new internal policy, the restructured International Valuation Standards Council (IVSC) has not reviewed and approved my comments. Therefore, these comments are my own. However, my comments do include substantial input from two of my close business colleagues (Rex Bryan, PhD, and Richard Jolk, PhD) who work regularly with the CRIRSCO-based classification systems.

In general, I am quite supportive of the draft classification document and the draft explanatory notes. The Task Force that prepared these documents has achieved the goals of simplification of category definitions and of using plain language in other definitions, while maintaining the recommendations of the Mapping Task Force. In particular, I note the removal of the often misunderstood or confused Reserve and Resource terms. I commend the work of those who contributed.

Specific Comments on the Classification Document

In Section I, para 1, line 2, I recommend substituting *subsurface* for *subsoil*.

The transition from a soil to a mineable material near or at the surface is at times problematical. Consider the case of bauxite; this material can be used to produce alumina (the precursor to aluminum) or be used as a soil for farming. Other soil/mineralization classes are laterites (nickel, iron), saprolites (gold) and caliches (nitrates). Note that the definition of soil includes laterite in <http://en.wikipedia.org/wiki/Laterite> .

In Section II, para 3, last line, I recommend modifying to read as follows:

..... level of certainty in the geological knowledge, *and for fossil energy and mineral resources that are extracted as fluids*, the potential recoverability of the quantities.

This change is in line with the explanatory notes for G1 through G3 in Annex I. Professionals who model solid mineral deposit geology find it useful to have geological observations remain independent of changing technology and new innovations. The issue of recoverability, though

appropriate for the G axis when being applied to fluids, blurs the difference of purpose of the three axes. For solid mineral geology, this blurring hinders the determination of where to invest time and expertise to enhance the class.

If this suggested wording addition is found to be unacceptable, then the last portion of the sentence should be reworded to:

.... potential *extractability and* recoverability of the quantities

For Section II, Figure 1, some simple labelling of three axes is necessary. This should show the direction of increasing confidence and the primary purpose item being measured by each axis. For example:

E1>E2>E3 Socio-Economic Viability
F1>F2>F3>F4 Project Feasibility
G1>G2>G3>G4 Geological Knowledge

Section III, Figure 2. My colleagues and I found that after digesting the three-dimensional Figure 1 with the help of three brief Section II paragraphs, the two-dimensional Figure 2 only caused considerable disorientation and confusion. We would prefer to be working with the three-dimensional classification diagram rather than Figure 2 when attempting to integrate the extensive information conveyed in the seven paragraphs and seven footnotes of Section III. (Previously, I similarly found the two-dimensional Tables 1 and 2 of the 2004 UNFC to be of little benefit).

In Section III, para 9, the sentence in the middle of the paragraph should read:

A low *quantitative* scenario is directly

Section IV, Figure 3. Similar to my comments on Figure 2, my colleagues and I found this two-dimensional tabulation difficult to digest and grasp in relation to the three-dimensional classification that the E, F, and G columns are referencing. Illustration in three-dimensions would aid visualisation.

Annex II, Category E2. Change *None Defined* to *No Sub-Categories*.

Sincerely,

Trevor R. Ellis, CPG, CMA, FAusIMM(CP)
Mineral Economist, Geologist, Minerals Valuer
Ellis International Services, Inc.