



4 April 2014

Attention ; Director of Operations

Queensland Resources Council  
133 Mary Street  
Brisbane Queensland 4000.  
Australia.

SUBJECT : COMMENT ON "Exposure draft: Australian Guidelines for Estimation and Classification of Coal Resources"

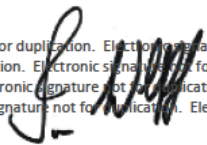
### Introduction

In reference to the Draft guideline on coal resources [australian\_coal\_guidelines\_draft\_march\_18032014.pdf], there are many good aspects, however this memo shall note issues of concern.

### Comments

- 1. Title Australian** – The term "Australian" is too limiting and perhaps should be Australiasian to match the JORC code. Some of the technical guidelines are better suited to Queensland or NSW coals, but less so for Tasmania or other states coals where thin seams and complex geology place different emphasis on the guidelines.
- 2. Title - Resources** – Previous Guidelines refer to Resources & Reserves. This Guideline is ONLY for Resources, so where is the guideline for Reserves ?
- 3. Glossary Density (64)** – Using the Preston Saunders formula for insitu high moisture coals is good. However when the density of such high moisture coal is required for RESERVES then the Preston Sunders Formula is not correct – as the coal is no longer insitu– reserves are extracted coal.
- 4. Points Of Observation (76)**- This guideline sets out excellent requirements for defining coal sampling, assays, statistics, etc, but does not treat the survey requirements (topography/ bore collar/ outcrops) with the same level of concern & detail. We must not assume that everyone will use differential GPS, as we must assume people are still conducting traditional theodolite & other forms of survey. To this end it is important to demonstrate validity of the survey checks, closure etc.
- 5. Emphasis on geostatistics (129 – 138)** – The overall new emphasis on geostatistics for Resources should be emphasized that it is an "option", and left up to the Estimator to determine the manner in providing the degree of confidence., not that they must select one or all of the attending list, and that they "must" adopt all other references to statistics.

6. **Coal Quality** (227) – It is interesting to note that nowhere in the guidelines do you refer to “roof & floor” sampling for determination of coal quality parameters. I support some such sampling, but not excessive amounts of such sampling.
7. **QAQC** (227- 284) – It is not coal industry practice to use standards (281), Standard & blank (282) and duplicates by independent parties (283).
  - a. Many certified labs use standards, but such standards may be questionable when exploration is being undertaken in a new coal basin- with different coal properties. Coal testing is undertaken by various methods for various properties, and standards may not be suitable between the different tests – say one coal has high ash, but another coal has high TS, or low AFT etc.
  - b. Blanks are not suitable – you may need to find a coal with zero ash to be a “blank” for ash !! Blanks are designed to see if there is a “trail” left from a previous sample in the dust / smear of the sample preparation equipment. Typically coal assays are in the 0.01 % range, wherein most mineral testing blanks are designed to see the influence at the ppm range !!
  - c. Duplicates by independent parties are rarely done – certainly not at the Resource stage, unless some specific problem has been identified. Duplicates would need to be done by at least 2 other labs – as the duplicate lab may be in error – as a 2 out of 3 is needed.
8. **Geological Modelling** (378) – this chapter assumes computers will be used to model – but before computers models were drafted by hand. The guidelines should recognize such manual methods are valid, provided adequate clarification of the technique is provided such that the hand drawn model can be repeated.
9. **Variograms & other geostatistics** (489) – note that some coal quality tests are very expensive (fluidity) & or need large samples (drop shatter test), and thus will not be undertaken at every bore hole – particularly for “Resources”. The section on such statistics should acknowledge that not all parameters shall have the same level of statistical representation.
10. **Kriging** (548) – This is one interpolation method, but the Guidelines should not recommend one method over another – bias is introduced. Please be reminded that readers of such guidelines may be non geologists !
11. **Inventory Coal** (598) – Note that Inventory coal can be located within a pit – like your spotted dog – but where the spots are a bit wider.
12. **Reporting Inventory** (630 – 631) – Need to clarify this line uses small e for estimate – implying the Resource Estimate tonnage should not include Inventory coal, but a JORC Resource Estimate report can include within the body of the report a section on Inventory Coal – but such tonnage is not included in the “Estimate”.
13. **Reasonable Prospects** (641) – this needs a major revision. It is entirely unreasonable to expect a NPV, capital estimate etc. for a project that may not start for 20 years in the future – justifying the estimation of the production cost & coal price for 20 years in the future is not real.
14. **Coal is accessible** ( 715 – 724) – It is normal to consider resources under roads, national parks etc, as these boundaries can be moved through legislation changes. It is appropriate to qualify “Resources” according to such limitations.

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Regards  
Ian Wollff.