

Committee Secretary,
Senate Standing Committee on Rural
Affairs & Transport,
PO Box 6100,
Parliament House,
Canberra ACT 2600.

Eric Heidecker PhD
Structural Geologist,



27th June 2011.

RE: Inquiry into management of the Murray Darling Basin- impact of mining coal seam gas.

Management of subsidence fracturing during mining of coal seam gas (CSG).

Subsidence management could benefit “the sustainability of water aquifers” (see Terms of Reference of the Enquiry) as well as the interests of CSG producers.

More consideration of subsidence is needed as “the science and evidence around the impact of CSG is not yet well known enough to gauge the long term effects on the aquifers” (Point 4.71 Committee Report dated May 20011). The science needs development as extraction of CSG in such vast amounts, so extensively, and for so many years is unprecedented. (There has been some past production of CSG, but not on such a scale involving many millions of tons per year of pressured gas and saline fluids.)

Subsidence fracturing could affect not only “the interconnectivity between the aquifers” (Point 4.71 of Committee Report May 2011) but also the integrity of coal seam seals that prevent loss of CSQ to the surface by way of inter-fractures and aquifers. Loss of CSG in this way could impact upon the economics of extraction and could jeopardize the argument that methane production helps management of global warming.

Fortunately there are measures that might be taken to reduce subsidence fracturing induced by CSG mining. However these measures need to be considered as early as possible in planning and design. They would require a comprehensive structural understanding of relationships between coal seams and aquifers. This understanding may need to be refined as there have been claims that: “There have been inadequate scientific studies done relating to our shallower underground aquifers (namely the Condamine alluviums)”, see separately a Submission for Senate Enquiry re: Mining Issues in the Murray-Darling Basin from the EPPA (Environment and Property Protection Association).

Eric Heidecker.