

**Senate Standing Committee on Economics**

**ANSWERS TO QUESTIONS ON NOTICE**

Resources, Energy and Tourism Portfolio  
Supplementary Budget Estimates 2008-09  
23 October 2008

**Question:** SR-25  
**Topic:** Mineral exploration site map  
**Proof Hansard Page:** E136

**Senator Johnston asked:**

**Senator JOHNSTON**—Is your agency interested in putting out some sort of map that says, ‘Here are the prospective sites,’ so that obviously we can see how strategically and beneficially located these 65 sites are to the obvious generators of the carbon that we would want to put in there?

**Dr Foster**—I think on the onshore in conjunction with states we will be putting out information along those lines.

**Senator JOHNSTON**—Do we know when? I would be very interested to see the information.

**Dr Foster**—All right. Again, I can just look at the currency of these maps and perhaps when I submit the list of basins that have been looked at, I will look at the currency of those maps as well.

**Senator JOHNSTON**—All right.

**Answer:**

Geoscience Australia has undertaken studies of potential basin sites as part of its contribution to the CO2CRC. Many of these reports (see attachment A) are now available from the CO2CRC website (<http://www.co2crc.com.au/publications/>).

Four major storage studies have been undertaken:

- Wunger Ridge, Western Bowen Basin,
- Galilee Basin,
- Vlaming Sub-basin,
- Browse Basin.

These are shown in Figure 1.

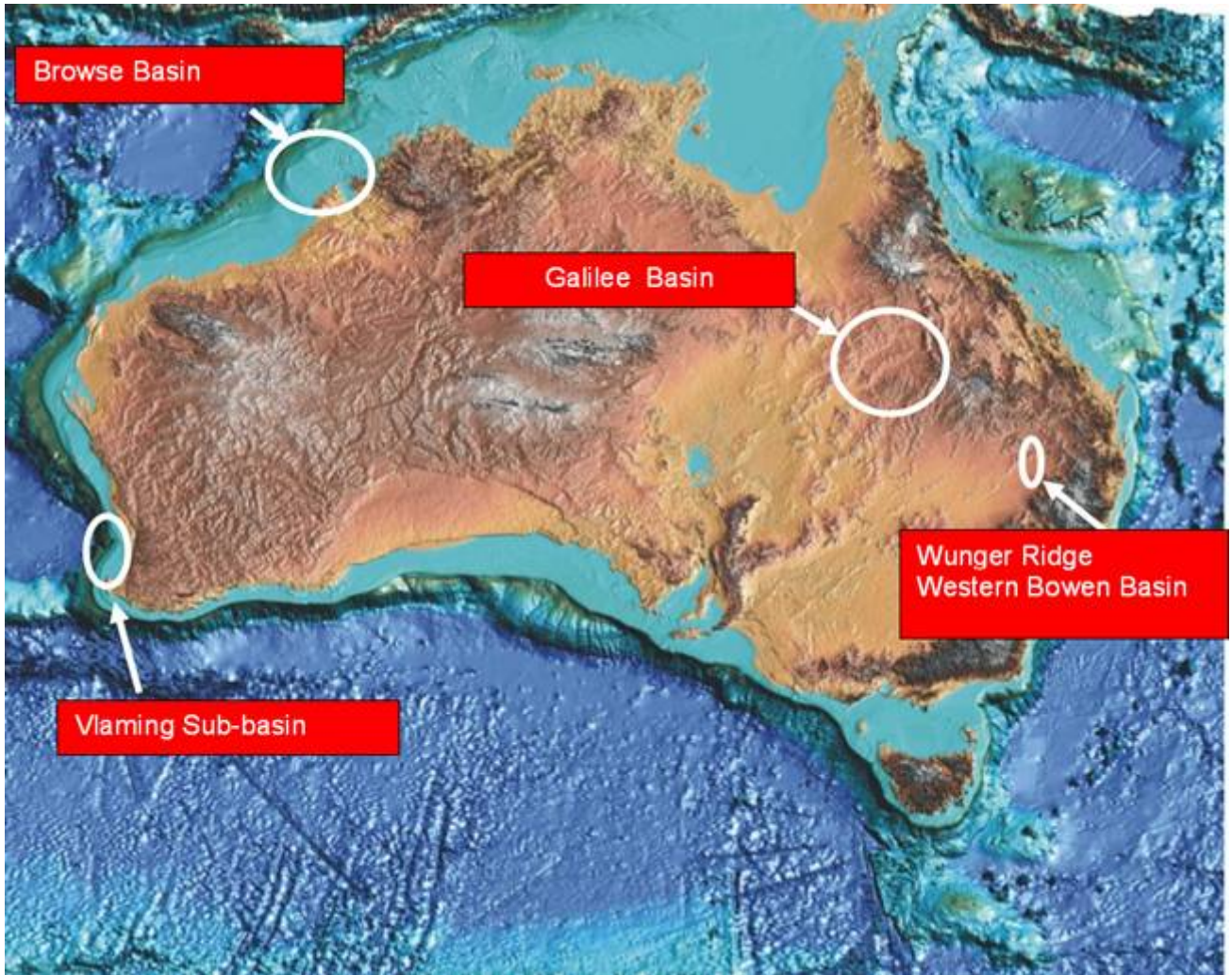


Figure 1: Geoscience Australia – CO2CRC 2004-08 – Major study potential CO<sub>2</sub> Storage Areas

Other areas have had minor studies undertaken:

- Denison Trough,
- Burnuga Anticline, Eastern Bowen Basin,
- Offshore Sydney Basin,
- Darling Basin,
- Offshore Otway Basin,
- Onshore southern Perth Basin.

The location of these areas is shown in Figure 2.

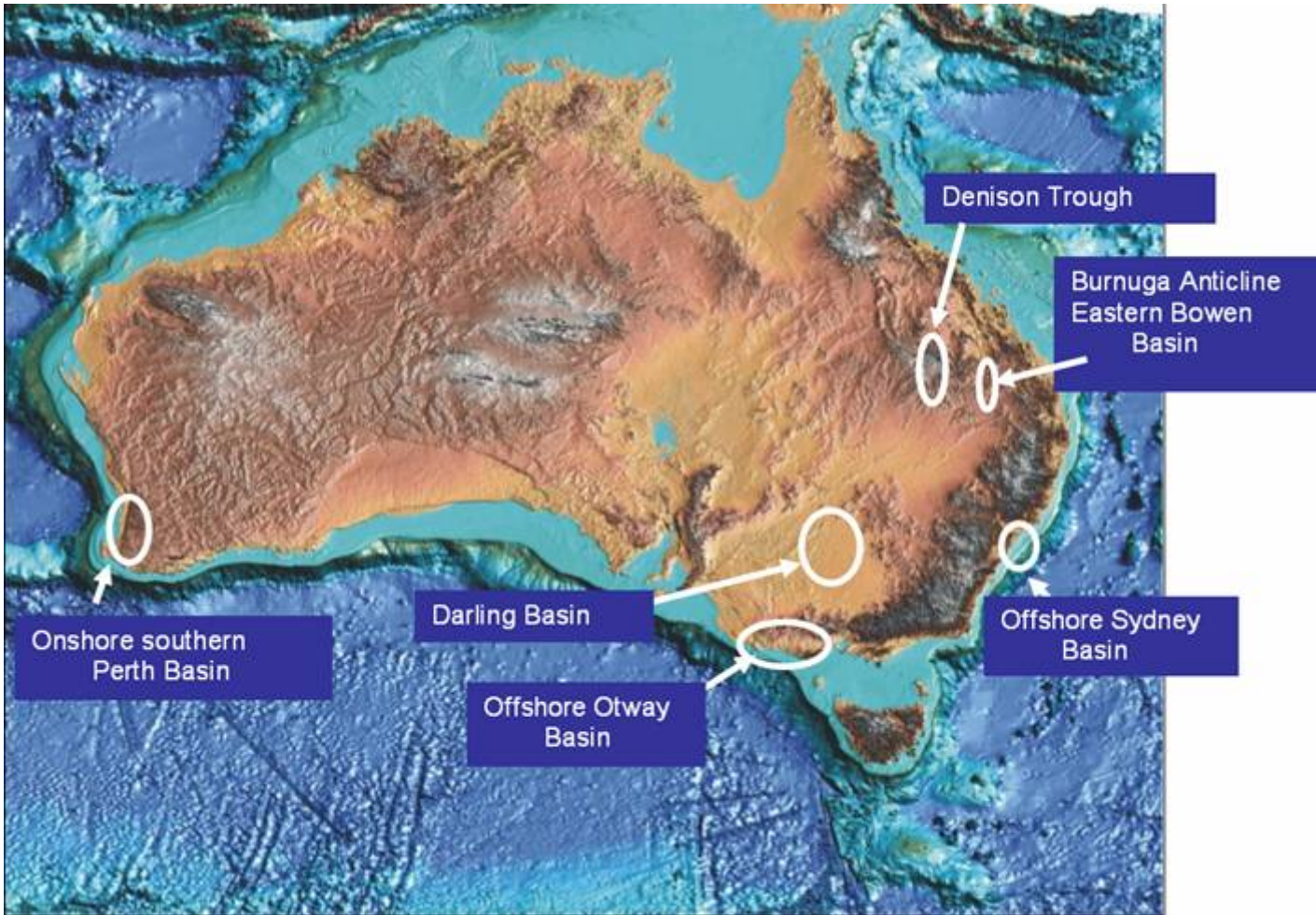


Figure 2: Geoscience Australia – CO2CRC 2004-08 – Minor study potential CO<sub>2</sub> Storage basins and sites

**Publicly available reports/presentations on sites for carbon dioxide storage in Australia (with Geoscience Australia authors)**

1. Gibson-Poole, C, Edwards, S, **Langford, R** and Vakarelov, B, 2008. Review of Geological Storage Opportunities for Carbon Capture and Storage (CCS) in Victoria. *In: Blevin, JE, Bradshaw, BE and Uruski, C (Eds), Eastern Australasian Basins Symposium III*, Petroleum Exploration Society of Australia, Special Publication, 1-24.
2. Varma, S, Dance, T, Underschultz, J, **Langford, R** and Dodds, K, 2007. Regional study on Potential CO<sub>2</sub> geosequestration in the Collie Basin and the Perth Basin of Western Australia. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia, CO2CRC Publication Number RPT07-0529. 98pp.
3. Varma, S, Dance, T, **Langford, R**, Dodds, K and Underschultz, J, 2007. Regional Study on CO<sub>2</sub> Geosequestration in the Collie Basin and the South-West of WA. *Oral presentation given at the DoIR Western Australian Government.*
4. Gibson-Poole, C, Edwards, S and **Langford, R**, 2007. Review of Geological Settings for Carbon Capture and Storage (CCS) in Victoria. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia, CO2CRC Publication Number RPT06-0506.
5. Gibson-Poole, C, Edwards, S, **Langford, R** and Vakarelov, B, 2007. *Review of Geological Storage Opportunities for Carbon Capture and Storage (CCS) in Victoria - Summary Report*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT07-0526.
6. Gibson-Poole, C, Edwards, S, **Langford, R** and Vakarelov, B, 2007. Review of geological storage opportunities for Carbon Capture and Storage (CCS) in Victoria. *Oral presentation given at the Victorian Department of Primary Industries*, Melbourne, Australia, 23 March.
7. **Bale, K**, 2007. *Geophysics Notes: Vlaming Sub-basin Seismic Interpretation Stage. Research Program 1.1-Technologies for Assessing Sites for CO<sub>2</sub> Storage. (Appendix 2 of report no. RPT06-0162)*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT06-0150.
8. **Causebrook, R**, Dance, T, **Bale, K**, Allinson, G, Daniels, R, Dunsmore, R, Ennis-King, J, Henning, A, Ho, M, **Monteil, E**, Neal, P, O'Sullivan, T, Otto, C, Tyson, S, Van Ruth, P, Watson, M, Wu, G and Yang, Q, 2007. *Southern Perth Basin Site Investigation and Geological Model for Storage of Carbon Dioxide. Research Program 1.1-Technologies for Assessing Sites for CO<sub>2</sub> Storage*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT06-0162.
9. **Sayers, J, Marsh, C, Scott, A**, Cinar, Y, **Bradshaw, J**, Henning, A, **Kalinowski, A, Patchett, A**, Daniel, R, Barclay, S and Underschultz, J, 2006. *Site Specific Studies for Geological Storage of Carbon Dioxide. Southeast Queensland CO<sub>2</sub> Storage Sites- Geological Basins Desk-Top Study. Includes a detailed assessment of the Bowen Basin, in particular the Wunger Ridge*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT05-0225.
10. **Patchett, A**, 2006. *CO<sub>2</sub> Storage Potential of Environmentally Sustainable Sites for Carbon Dioxide Injection (UEI 37 and 39) Eastern Bowen Basin, Queensland (Appendix 10.3 of report no. RPT05-0225)*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra. CO2CRC Publication Number RPT06-0037.
11. **Kalinowski, A**, 2006. *CO<sub>2</sub> Storage Potential in the Southeast Bowen Basin. (Appendix 10.4 of report no. RPT05-0225)*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT06-0042.
12. **Sayers, J**, 2006. *Geophysics Review of the Wunger Ridge Study Area. (Appendix 10.6.6 of report no. RPT05-0225)*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra. CO2CRC Report Number RPT06-0144.
13. **Sayers, J, Marsh, C, Scott, A**, Cinar, Y, **Bradshaw, J**, Hennig, A, Barclay, S and Daniel, R, 2006. Assessment and sensitivity considerations of a potential storage site for carbon dioxide - A Queensland case study. *Oral presentation given at the AAPG International Conference & Exhibition*, Perth, Australia, 5-8 November.
14. **Newlands, I, Langford, R**, and **Causebrook, R**, 2006. Assessing the CO<sub>2</sub> storage prospectivity of developing economies in APEC and applying methodologies developed in

- GEODISC to selected sedimentary basins in the Eastern Asian region. In: Book of Abstracts, Oral Presentations, *Eighth International Conference on Greenhouse Gas Control Technologies*, 19-22 June 2006, Trondheim, Norway. IEA: pp.19. Extended abstract available from [www.ghgt8.com](http://www.ghgt8.com) (accessed 1 August 2006).
15. **Langford, R, Rigg, A, Causebrook, R, Patchett, A, Bradshaw, B, Marsh, C, and Scott, A**, 2006. CO2 Storage Potential of Selected Sedimentary Basins in Eastern Australia. In: Book of Abstracts; Posters; Eighth International Conference on Greenhouse Gas Control Technologies, 19-22 June 2006, Trondheim, Norway. IEA: pp.334-335. Extended abstract available from [www.ghgt8.com](http://www.ghgt8.com) (accessed 01 August 2006).
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  17. Spencer, L, Xu, J, **La Pedalina, F**, and Weir, G, 2006. Site Characterisation of the Otway Basin Carbon Dioxide Geo-sequestration Pilot Project in Australia. In: *Book of Abstracts, Posters, Eighth International Conference on Greenhouse Gas Control Technologies*, 19-22 June 2006, Trondheim, Norway. IEA: pp.253.
  18. **Newlands, I, Langford, R and Causebrook, R**, 2006. Assessing the CO2 storage prospectivity of developing economies in APEC - Applying methodologies developed in GEODISC to selected sedimentary basins in the Eastern Asian region.. In: *Book of Abstracts; Oral Presentations; Eighth International Conference on Greenhouse Gas Control Technologies*, Trondheim, Norway. 19-22 June pp.19. Extended abstract available here and from [www.ghgt8.com](http://www.ghgt8.com) [accessed 01 August 2006].
  19. Amin, R, Rigg, A, **Causebrook, R, Patchett, A, Bradshaw, B and Marsh, C**, 2006. CO2 storage potential of selected sedimentary basins in eastern Australia.. In: *Book of Abstracts; Posters; Eighth International Conference on Greenhouse Gas Control Technologies*, Trondheim, Norway. 19-22 June pp. 334-335. Extended abstract available from here and [www.ghgt8.com](http://www.ghgt8.com) [accessed 01 August 2006].
  20. **Newlands, I, Langford, R and Causebrook, R**, 2006. Assessing the CO2 storage prospectivity of developing economies in APEC - applying methodologies d. *Oral presentation given at the Eighth International Conference on Greenhouse Gas Control Technologies*, Trondheim, Norway, 19-22 June.
  21. Spencer, L, Xu, J, **La Pedalina, F** and Weir, G, 2006. Site Characterisation of the Otway Basin Carbon Dioxide Geosequestration Pilot Project in Victoria, Australia. *Poster presented at the Eighth International Conference on Greenhouse Gas Control Technologies*, Trondheim, Norway, 19-22 June.
  22. **Causebrook, R**. 2005. The Geological Storage Potential of the Offshore Sydney Basin. An Addendum to: Geosequestration Investigation - offshore New South Wales; a paper by Sayers et al 2004. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia, CO2CRC Publication Number RPT05-0023.
  23. **Marsh, C and Scott, A**, 2005. *Review of the Carbon Dioxide Injection and Storage Potential of the Denison Trough, Queensland*. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia. CO2CRC Publication Number RPT05-0015.
  24. **Patchett, A, and Langford, R**, 2005. *New South Wales - Deep Saline Aquifer Storage Potential*. CO2CRC/Geoscience Australia, Canberra, Australia, June 2005. CO2CRC Report Number RPT05-0020.
  25. **Bradshaw, J, Bradshaw, B, and Rigg, A**, 2003. *Summary Report: Notes regarding the geological storage potential for CO2 in New South Wales*. Cooperative Research Centre for Greenhouse Gas Technologies/Geoscience Australia, Canberra, Australia, August 2003. CO2CRC Report Number RPT05-0021.
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  27. **Sayers, J**, 2005. *A note on the relationship between petroleum Fields in the Bowen and Surat Basins and the possible implications for the migration of injected carbon dioxide*.

- Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia, CO2CRC Publication Number RPT05-0025.
28. **Sayers, J**, 2005. SE Queensland/Wunger Ridge flank, CO2CRC Program 1. Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia, CO2CRC Publication Number RPT05-0026.
  29. **Langford, R** and **Patchett, A**, 2005. Potential of coal measures in the Sydney and Gunnedah Basins, New South Wales; and the Bowen, Surat and Galilee Basins, Queensland. Innovative Carbon Technologies Pty Ltd, Canberra, Australia, CO2CRC Report No: RPT07-0752.
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  32. **Sayers J**, **Kernich A** and **Dance T** (2004). Geosequestration investigations - offshore New South Wales, Australia. In: PJ Boulton, DR Johns and SC Lang (eds.), *Eastern Australasian Basins Symposium II, Petroleum Exploration Society of Australia, Special Publication*, Adelaide, South Australia, 19-22 September, pp.389-402.
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