



Australian Government

Department of Resources, Energy and Tourism



Australian Government

Geoscience Australia

2000 RELEASE OF OFFSHORE AREAS FOR GREENHOUSE GAS STORAGE ASSESSMENT

**AREAS TORQ-01 AND TORQ-02
TORQUAY SUB-BASIN, OTWAY BASIN
VICTORIA**

**BIDS CLOSE: The later of the 6 months after the release of the acreage or
2 months after the regulations under the Act have been promulgated**

- Shallow water depths
- Storage potential in long distance migration dissolution/residual trapping and structural traps
- Proximal to existing infrastructure

Special Notices apply, refer to **Guidance Notes for Applicants**

GREENHOUSE GAS (GHG) ACREAGE RELEASE – 2009

TORQUAY SUB-BASIN, OTWAY BASIN, VICTORIA

The Torquay Sub-basin is a Mesozoic to Cenozoic depocentre that forms part of the eastern Otway Basin. Water depths are shallow, with a maximum depth of approximately 90 m. Three exploration wells exist in the offshore part of the sub-basin and seismic coverage is moderate. Potential for greenhouse gas storage is within long distance migration dissolution/residual trapping, inversion anticlines and hanging wall traps.

Reservoir: Eastern View Group and the overlying Boonah Formation.

Seal: Anglesea Siltstone within the Demons Bluff Group regional seal and intra-formational seals within the Eastern View Group.

Trap: Multiple structural and sedimentary traps and migration dissolution/residual trapping.

Refer to Gibson-Poole et al., 2008 for stratigraphic information.

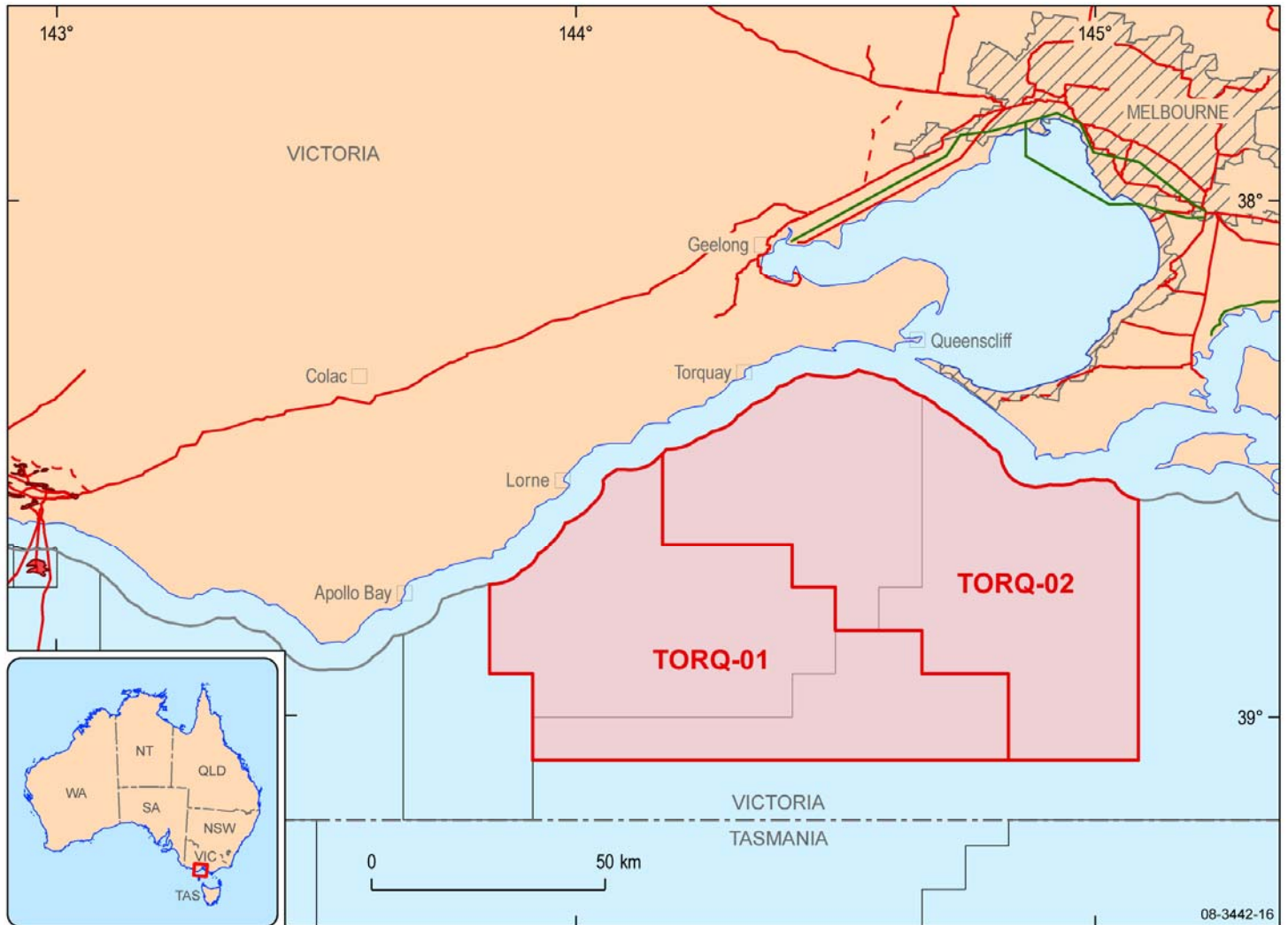
TORQ-01 AND TORQ-02, Torquay Sub-basin, Otway Basin

TORQ-01 and TORQ-02 are located approximately 100 km southwest of Melbourne (Figure 1). The release areas are bounded by the coastal waters limit to the north, and extend close to the Victoria/Tasmania border in the south.

Release area TORQ-01 covers an area of approximately 3305 square kilometres and 53 graticular blocks, or parts thereof (Figure 2). The release area TORQ-02 covers an area of approximately 3740 square kilometres and 63 graticular blocks or parts thereof (Figure 2).

Overlapping Petroleum Exploration Titles

Release Areas	Overlapping Petroleum Titles	Petroleum Title Holders
TORQ-01	VIC/P62	Trident Energy Ltd
TORQ-02	VIC/P62	Trident Energy Ltd



Field outlines supplied by Encom Petroleum Information Pty Ltd. Field outlines in GPinfo are sourced from the operators of the fields only. Outlines are updated at irregular intervals but with at least one major update per year. The Coastal Waters shown on this map are indicative only. A precise determination of the Coastal Waters will be determined at the time of issue and included in the permit boundary as a Metes and Bounds determination.

- | | | | |
|---|--------------------------|--|---------------------------------------|
|  | 2009 GHG release area |  | Gas pipeline |
|  | Existing petroleum title |  | Oil pipeline |
|  | Gas field |  | Coastal waters limit |
| | |  | Scheduled area boundary (OPGGSA 2006) |

Figure 1. Location map of offshore Greenhouse Gas Storage release areas for Assessment TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin.

GRATICULAR BLOCK LISTING

Area TORQ-01, Torquay Sub-basin, Otway Basin

Map Sheet SJ 54 (Hamilton)

2304 PART	2375 PART	2376 PART	2447	2448	2519	2520	2592	2664
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Map Sheet SJ 55 (Melbourne)

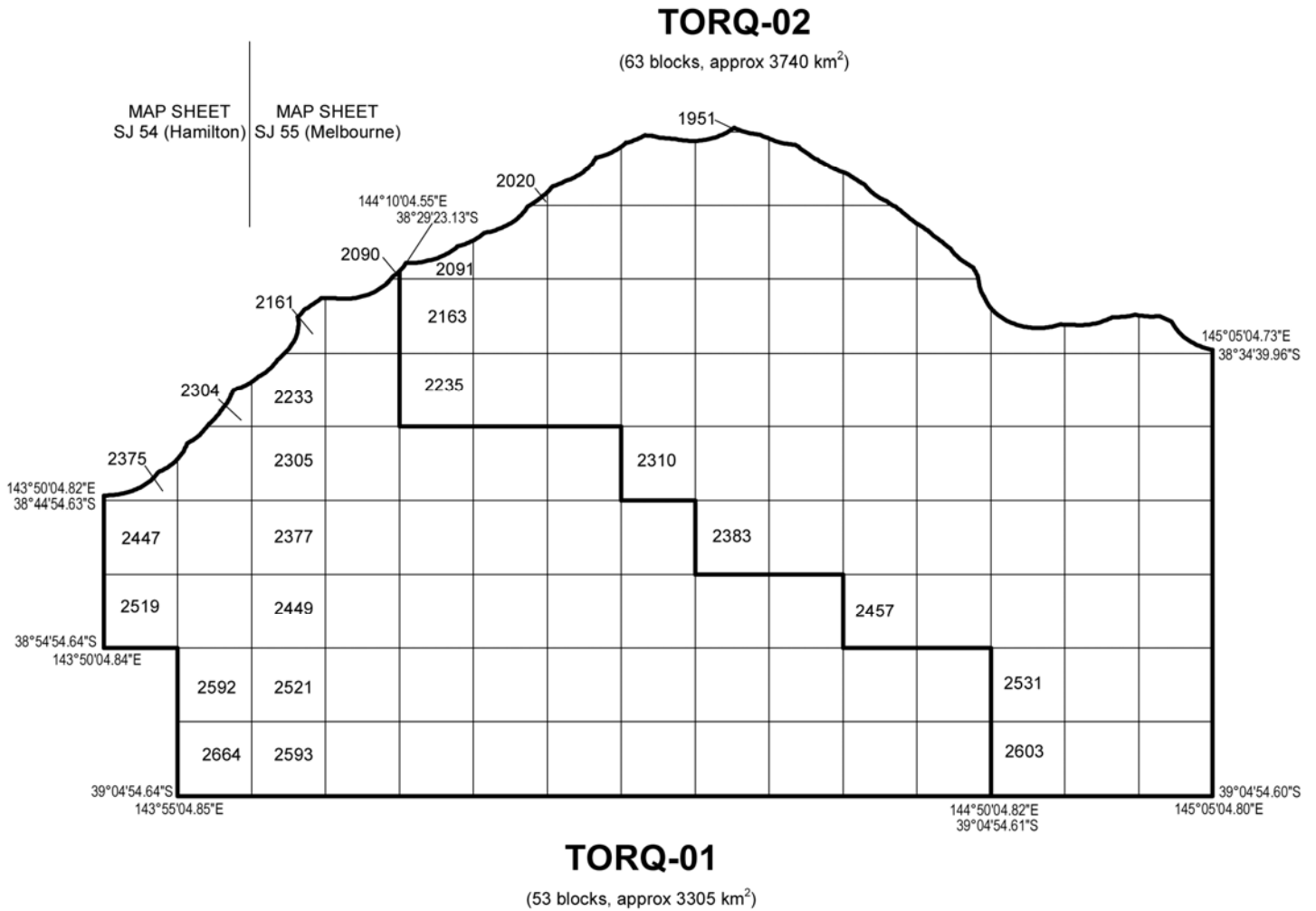
2090 PART	2161 PART	2162 PART	2233 PART	2234	2305	2306	2307	2308	2309
2377	2378	2379	2380	2381	2382	2449	2450	2451	2452
2453	2454	2455	2456	2521	2522	2523	2524	2525	2526
2527	2528	2529	2530	2593	2594	2595	2596	2597	2598
2599	2600	2601	2602						

Area TORQ-02, Torquay Sub-basin, Otway Basin

Map Sheet SJ 55 (Melbourne)

1951 PART	2020 PART	2021 PART	2022 PART	2023 PART	2024 PART	2025 PART	2091 PART	2092 PART	2093
2094	2095	2096	2097 PART	2098 PART	2163	2164	2165	2166	2167
2168	2169	2170 PART	2171 PART	2172 PART	2173 PART	2235	2236	2237	2238
2239	2240	2241	2242	2243	2244	2245	2310	2311	2312
2313	2314	2315	2316	2317	2383	2384	2385	2386	2387
2388	2389	2457	2458	2459	2460	2461	2531	2532	2533
2603	2604	2605							

2009 Release Areas Otway Basin, Victoria



Geographical coordinates on this map are presented with reference to the Geocentric Datum of Australia (GDA94). Permit areas are based on the same grid, Australian Geodetic Datum (AGD66), that has defined areas since the Petroleum (Submerged Lands) Act was proclaimed in 1967. However, with the adoption of GDA94, the graticules are no longer referred to in whole multiples of 5 minutes as they were under AGD66. Parts of the outer limit of Release Area TORQ-01 and TORQ-02 are defined by the outer limit of the Coastal Waters. The Coastal Waters shown on this map are indicative only. A precise determination of the Coastal Waters will be determined at the time of issue and included in the permit boundary as a Metes and Bounds determination.

IDEAS 9016-5

Figure 2. Graticular block map of offshore Greenhouse Gas Storage release areas for Assessment TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin

WELL DATA

Well Completion reports – TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin

Well	Operator	Year	Total Depth (m)
Anglesea 1	Oil Dev	1962	3068
Anglesea 2	SA Oil Wells Co	1922	230
Geelong Flow 1	Geelong Flow Oil Co	1949	486
Hindhaugh Creek 1	Pursuit Oil NL	1969	2372
Ingleby 1	Gas and Fuel Exploration NL	1990	331
Irrewarra 1	Cultus Petroleum (Aust) NL	1998	552
Konkon 1	Esso Explor and Prod Aust Ltd	1973	1537
Nerita 1	Shell Dev (Aust) P/L	1967	2042
Seal 1	Bridge Oil Ltd	1986	1670
Snail 1	Hematite Petroleum	1972	1235
Wild Dog 1	Shell Dev (Aust) P/L	1993	1222

Analysis reports – TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin

Well	State	Year	Test	Title
Anglesea 1	Vic	1968	Petrology	A Petrographic Study of the Otway Basin and Barrabool Hills, Vic
Anglesea 1	Vic	1965	Mineralogy	Petrological examination of sediments from an ODNL well, Otway Basin, Vic
Anglesea 1	Vic	1965	Petrology	Petrological examination of sediments from an ODNL well, Otway Basin, Vic
Anglesea 1	Vic	1971	Geology	A Review of the Otway Basin.
Anglesea 1	Vic	1987	Palynology	Palynology of the Torquay Embayment in Anglesea 1, Bass Basin, Aust.
Nerita 1	Vic	1987	Palynology	Overview of Palynology of the Torquay Embayment Bass basin Australia.
Snail 1	Vic	1987	Palynology	Overview of Palynology of the Torquay Embayment Bass basin Australia.

Geoscience Australia's geological databases provide detailed biostratigraphic (STRATDAT), geochemical (ORGCHEM) and interpreted depositional environment information (RESFACS) from open file exploration wells.

<http://dbforms.ga.gov.au/www/npm.well.search>.

Contact Geoscience Australia's Repository for more information or to arrange access to open file exploration wells, phone 61 (0)2 6249 9222, e-mail ausgeodata@ga.gov.au.

PHYSICAL DATA

Cores and Cuttings – TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin

Well	Type	Top (m)	Bottom (m)	Remark
Anglesea 1	Core	149.39	3068.59	100mm of every 600mm recovered. Cores 31-33 were examined for paly & Paleo
Anglesea 1	Cuttings	12.19	3068.59	
Hindhaugh Creek 1	Core	383.23	2372.25	
Hindhaugh Creek 1	Cuttings	12.19	2371.95	100mm of every 600mm recovered.
Nerita 1	Cuttings	189.02	2044.2	
Seal 1	Cuttings	270	1668	Washed sample
Snail 1	Core	813.1	969.2	100mm every 600mm recovered.
Snail 1	Cuttings	243.9	1234.75	
Wild Dog 1	Cuttings	327	1224	

Contact Geoscience Australia's Repository for more information or to arrange access to core and cuttings, phone 61 (0)2 6249 9222, e-mail ausgeodata@ga.gov.au.

GEOPHYSICAL DATA

Seismic Surveys – TORQ-01 and TORQ-02, Torquay Sub-basin, Otway Basin

Survey Name	UNO	Year	Type	Processed	Field	Navigation
AGSO 40,Bass Strait	S7820001	1982	2D	Yes	Yes	Yes
AGSO 48	S0850001	1885	2D	Yes	Yes	Yes
Kangaroo Island	S3960008	1996	2D	No	Yes	Yes
OS88A	S3880007	1988	2D	Yes	Yes	Yes
AGSO 31 Southern Ocean 1	S0790001	1979	2D	No	No	Yes
AGSO 32 Southern Ocean 2	S0800002	1980	2D	No	No	Yes
AGSO 47 Kerguelen 1	S0850002	1985	2D	Yes	No	Yes
AGSO 147 Tasmania Geology	O7950003	1995	2D	No	Yes	Yes
AGSO 171 Howick Offshore	S3960001	1996	2D	No	Yes	Yes

Contact Geoscience Australia's Repository for more information or to arrange access to the seismic data, phone 61 (0)2 6249 9222, e-mail ausgeodata@ga.gov.au.

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Refer to the CRC for Greenhouse Gas Technologies website www.co2crc.com.au for further references associated with Greenhouse Gas Storage.