

**Table 1. Initial 15 Candidate Sites - Resource Estimates**

Candidate Site Name	System (Age)	Estimated Target Surface Area (km <sup>2</sup> )	Reservoir Estimated Net Pay Thickness (m)	Reservoir Estimated Volume (m <sup>3</sup> ) (80% geometry correction)	Reservoir Average Porosity (%) (see table below)	Reservoir Volume as US Barrels (bbl)	Reservoir Volume: Minus water/gas Saturation (bbl)	Possible Potential Recoverable Estimate (75% lost) (bbl)
Bellevue #1	BV #1	L + G	361*	25,992,000	10	1,634,846,895	1,164,828,413	291,207,103
Thunderbolt #1	TB #1	L + G	350*	9,800,000	10	616,401,184	439,185,844	109,796,461
Interlaken #1	IL #1	G (P)	100	2,240,000	15	211,337,549	150,578,004	37,644,501
Bracknell #1	BN #1	G (Tr-P)	100	1,600,000	12.5	125,796,160	89,629,764	22,407,441
Butlers Rise #1	BR #1	G (P)	100	1,920,000	15	181,146,470	129,066,860	32,266,715
Stockwell #1	SW #1	G (Tr-P)	100	1,280,000	12.5	100,636,928	71,703,811	17,925,953
Cressy #1	CR #1	G (Tr-P)	80	576,000	12.5	45,286,618	32,266,715	8,066,679
Hunterston #2	HS #1	G (P)	100	1,600,000	15	150,955,392	107,555,717	26,888,929
Bellevue #2	BV #2	L + G	361*	25,992,000	10	1,634,846,895	1,164,828,413	291,207,103
Hummocky #2	HH #1	G (Tr-P)	80	576,000	12.5	45,286,618	32,266,715	8,066,679
Scotts #1	ST #1	G (P)	100	2,240,000	15	211,337,549	150,578,004	37,644,501
Cressy #2	CR #2	G (Tr-P)	100	1,600,000	12.5	125,796,160	89,629,764	22,407,441
Lonnavele #2	LV #2	G (P)	100	2,240,000	15	211,337,549	150,578,004	37,644,501
Macquarie #1	MR #1	G (Tr-P)	100	1,600,000	12.5	125,796,160	89,629,764	22,407,441
Quamby #1	QY #1	G (P)	80	576,000	15	54,343,941	38,720,058	9,680,015
<b>Totals</b>					<b>15</b>	<b>4,147,247,803</b>	<b>2,954,914,060</b>	<b>738,728,515</b>

G = Gondwanan - Permo-Triassic Petroleum System.

L = Larapintine - Ordovician - Silurian Petroleum System.

Water Saturation: 25%

Gas Saturation: 5%

Note: calculation assumes API of 20 (therefore the metric 6.289808 conversion factor is used)

\*Based on Seismic 'Bright Spots'

Ranking (Risk)		Average Porosity Calculation Used			
Age	Tertiary	Triassic	Permian	Paleokarst	Ordovician
High	20%	20%	27%	3%	12%
Best	10%	10%	15%	2%	8%
Low	5%	5%	2%	1%	3%

June 2008 (prepared by Tony Collings)



Table 2. Risk Analysis\_ 8 Initial Candidate Well

Candidate Name	Abbreviated Name	Petroleum System	Risk Factors						Success Ratio (%)	Depth (m)	Time (days)	Start Day	Finish Day
			Source	Maturity Migration	Reservoir	Seal	Trap	Timing					
Rig Mobilisation												60	531
Bracknell #1	BN #1	G	9	8	9	8	9	8	85	1450	45	171	216
Butlers Rise #1	BR #1	G	9	8	8	8	8	7	80	1050	40	226	271
Bellevue #1	BV #1	L	7	8	6	7	9	6	72	3500	70	286	356
Thunderbolt #1	TB #1	L	7	9	7	7	8	4	70	3250	60	371	431
Interlaken #1	IL #1	G	7	7	7	7	7	7	70	1000	30	446	476
Cressy #1	CR #1	G	8	7	8	7	7	2	65	1500	45	61	106
Hummocky Hills #1	HH #1	G	8	7	8	8	8	2	68	1500	45	116	161
Quamby #1	QB #1	G	7	7	6	7	7	8	70	1000	30	491	531

TD= 14250

**G = Gondwanan** - Permo-Triassic Petroleum System.**L = Larapintine** - Ordovician - Silurian Petroleum System.**Source** -Larapintine PS, Ordovician - Silurian carbonates and shales; Gondwanan PS, Early Permian shales and oil shales (including tasmanite), mid-late Permian coals and shales.**Maturity/Migration** - Larapintine PS, dry-wet gas window in central Tasmania, overmature in north and west; Gondwanan PS, immature for oil in northern Tasmania, mature in central and south.**Reservoir** - Larapintine PS, paleokarst with primary and secondary porosity in carbonates (basin margin reefs); Gondwanan PS, Permian and Triassic sandstones, fractured and weathered dolerite beneath Tertiary sediments.**Seal** - Larapintine PS, Early Devonian shales; Gondwanan PS, Permian shales and Jurassic dolerite.**Trap** - Larapintine PS, Ordovician - Devonian folding and faulting; Gondwanan PS, Jurassic and Tertiary faults and anticlines.**Timing** - Larapintine PS, oil/gas generation from Devonian - Cretaceous; Gondwanan PS, oil/gas generation from Cretaceous to Tertiary.**Time** - From spud date to TD, including well testing.**Estimated Cost** - Based on complete turnkey approach, with remote site risk (approx US \$1000/1m drilled).



**Table 3. Calculated Generative Potential and Resource Estimates: Larapintine and Gondwanan Petroleum Systems**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Formation	TOC	H Index	Kerogen Type	Thickness (m)	Tasmania Basin % (mature area km <sup>2</sup> )	Gas Volume Trillion (T scf)	Gas Volume assuming 95% lost G/20 (T scf)	Gas volume assuming 67% of H <sup>*</sup> 0.67 (T scf)	Gas Energy remaining (P Joules)	Oil Volume (MMbbl)	Oil Volume assuming 95% lost (MM bbl)	Oil Volume assuming 25% of L (MM bbl)	Gross Gas Value recovered J*4.5 (millions US \$)	Gas E@P costs (12 %) million US \$	Gas Royalty (12%) million US \$	Net Gas Value after royalty and E@P costs (millions US \$) Pre-tax	Oil Value recovered M x \$130 (millions US \$)	Oil E@P costs (15 %) million US \$	Oil Royalty (12%) million US \$	Net Oil Value after royalty and E@P costs (millions US \$) Pre-tax
Gondwanan: Tasmanite Horizons (average)#	16.9	748	I	*1.3	16.66 (5,000)	12	1	0	443	7423.76	371.188	92.797	1,995	239.373	210.648	1,545	12,064	1809.54	1230.49	9,024
Woody Island/Quamby #	1	100	II/III	150	40 (12,000)	29	1	1	1,071	83.7	4.185	1.04625	4,817	578.085	508.715	3,731	136	20,4019	13,8733	102
Liffey Group # (carbonaceous sediments)	81	809	II/III	0.2	40 (12,000)	30	1	1	1,081	19522.7	976.1352	244.0338	4,863	583.553	513.527	3,766	31,724	4758.66	3235.89	23,730
Cygnnet Coal Measures ^	47.8	45	III	1	16.66 (5,000)	38	2	1	1,393	55.57	2.7785	0.694625	6,267	752.083	661.833	4853.443658	90	13,5452	9,21073	67,545335
Torbanite: Lower Freshwater Sequence ^	72.6	398	III	0.2	3.33 (1,000)	4	0	0	127	580.998	29.0499	7.262475	574	68.8361	60.5757	444.2220922	944	141.618	96,3004	706,203069
Macrae Mudstone #	1.97	105	II/III	2	26.66 (8,000)	3	0	0	105	14.952	0.7476	0.1869	472	56.607	49.8142	365.3040011	24	3,64455	2,47829	18,174156
Larapintine: Gordon Group Limestone *	0.78	50	II/III	150	10 (3000)	63	3	2	2,313	30.753	1.53765	0.384413	10,407	1248.83	1098.97	8059.143195	50	7,49604	5,09731	37,3802715
Totals (rounded)						179	9	6	6,532	27,712.44	1,385.62	346.4055	29,395	3,527.37	3,104.09	22,763	45,032.71	6,754.91	4,593.34	33,684

Tasmania consumes 115 Petajoules of energy per annum (115,000,000 GJ).

Oil/gas volume calculated using ZetaWare source rock potential calculator ([www.zetaware.com](http://www.zetaware.com)).

Gas volume converted to energy using [www.onlineconversion.com](http://www.onlineconversion.com).

^ Chester, 2004.

\*Burrett and Martin (eds), 1989.

**Comparison of Tasmania gas total:** Santos estimates 126 trillion scf of natural gas as total WA reserve (Australian, 10/07/07).

Tasmania Basin: 30,000 km<sup>2</sup> (#Reid, 2004)

Density of shale: 2.3 g/cc. ([www.zetaware.com](http://www.zetaware.com)).

Density of Tasmanite: 1.76-1.77 g/cc. From James, 1950. p63.

Density of Tasmanites derived oil: 0.97 g/cc. From James, 1950. table 3, p159.

Density of gas: LNG (methane) 0.41-0.5 g/cc ([www.wikipedia.com](http://www.wikipedia.com))

Gas market price: \$4.50 US/GJ (Australian, 10/7/07)(column N).

Gas price per GJ: \$.75 US MM BTU (GJ) ([www.wtrg.com](http://www.wtrg.com))

Density of oil: 0.8-0.97 g/cc (API 25=0.904, API 42=0.816)

Tasmania consumes 32.2 PJ (28%), of its annual energy budget in fossil fuels.

1 GJ = 10<sup>9</sup> Joules

1 PJ = 10<sup>15</sup> Joules

Gross value before E@P and Royalties (millions US \$) =

56,448

74,427

Predicted Gas Reserve in Petajoules (10<sup>15</sup> J) =

6,532

Number of years supply of all Tasmania's energy =

42.14302432

Oil market price per barrel: \$130 US/bbl ([www.wtrg.com](http://www.wtrg.com))

Average oil price for previous 12 months: \$85 US/bbl.

June 2008 (prepared by Tony Collings).



**Table 4. Well Costing Proposal**

Well Site Name	Depth (m)	Days (inc move)	Cost P&A	C&S
Bellevue 1	2600	43	\$4,400,000	\$4,754,000
Thunderbolt 1	3250	43	\$5,547,000	\$5,835,000
Interlaken 1	1000	22	\$2,803,000	\$2,964,000
Bracknell 1	1450	28	\$2,930,000	\$3,100,000
Butlers Rise 1	1050	28	\$3,298,000	\$3,489,000
Stockwell 1	1600	21	\$2,371,000	\$2,556,000
Cressy 1	1500	21	\$3,084,000	\$3,260,000
Hunterston 2	1050	18	\$3,084,000	\$3,260,000
Mobilization/Demobilization				\$2,000,000
	Total (with 10% contingency)		\$14,767,000	\$17,665,000
	Total (with no contingency)		\$13,290,300	\$15,898,500
Core Office				\$10,000,000
Totals				\$29,665,000
NOTE: Costs are ESTIMATES only based on current data and program				
NOTE: All costs include a 10% contingency.				
NOTE:: P&A (Plug and abandon) costs apply to dry wells				
NOTE: C&S costs (Case and suspend) costs apply to successful wells				

Note: well site order may change without notice (depending on geological/logistical constraints)



**Table 5. Estimated Reservoir Depth/Volume/Value - 15 Sites**

Drillsite (Top 15)	Reservoir/Structure Depth (m)				Structure Volume Estimate (m³) (80% volume corrected)	Structure Volume Estimate (cf)	Oil Estimate P90 (barrels - BBL)	Resource Value \$US (@ \$120/BBL)
	Triassic	Permian	Paleokarst Siluro- Devonian Carboniferous	Ordovician				
BV #1 Bellevue (NE)	300	400/550/650/820	2200	2425/3570 (4440m basement)	25,992,000	917,907,480	283,000,000	\$33,960,000,000
TB #1 Thunderbolt (S)	500	775/1275	1800	2550 (3250m basement)	9,800,000	346,087,000	116,000,000	\$13,920,000,000
BN #1 Bracknell	350/750	1200/1350/1400 (1700m basement)			1,600,000	56,504,000	49,000,000	\$5,880,000,000
BR #1 Butlers Rise		150/200/1050 (1700m basement)			1,920,000	67,804,800	18,000,000	\$2,160,000,000
IL #1 Interlaken		550/650/700 (1400m basement)			2,240,000	79,105,600	21,000,000	\$2,520,000,000
CR #1 Cressy	700	800 (1600m basement)			576,000	20,341,440	8,000,000	\$960,000,000
SW #1 Stockwell	550/700	800/875/1050 (1600m basement)			1,280,000	45,203,200	4,000,000	\$480,000,000
HS #2 Hunterston		850 (1050m basement)	950		1,600,000	56,504,000	6,000,000	\$720,000,000
BV #2 Bellevue (NW)	375/425	550/575/750	2250	2950 (4440m basement)	25,992,000	917,907,480	285,000,000	\$34,200,000,000
HH #1 Hummocky	400	800/875/1050 (1500m basement)			576,000	20,341,440	8,000,000	\$960,000,000
ST #1 Scotts Tier		400/475/550 (1300m basement)			2,240,000	79,105,600	4,000,000	\$480,000,000
CR #2 Cressy	600/675	850/875/1000 (1550m basement)			1,600,000	56,504,000	8,000,000	\$960,000,000
LV #2 Lonnavele	300?	900 (UK basement)			2,240,000	79,105,600	3,000,000	\$360,000,000
MR #1 Macquarie	900	1200/1325/1450 (2100m basement)			1,600,000	56,504,000	5,000,000	\$600,000,000
QY #1 Quamby		100/175/250/525 (950m basement)			576,000	20,341,440	2,000,000	\$240,000,000
<b>Totals</b>					79,832,000	2,819,267,080	820,000,000	\$98,400,000,000

P 90 STOOP calculation based on Monte Carlo Method.

**Note: Reservoir/Structure Volume Based on Table 1 Calculations**

UK = unknown

June 2008 (prepared by tony Collings)



**Table 6 Undiscovered Prospective Resources - Volume Ranking of 17 Sites.**

Ranking	Monte Carlo Estimate*	P90 (mmbbl's)	P50 (mmbbl's)	P10 (mmbbl's)
1	Bellevue #1	283	620	1,256
2	Thunderbolt #1	116	243	468
3	Bracknell #1	49	100	194
4	Derwent Bridge #1	36	87	199
5	Interlaken #1	21	45	92
6	Nile River #1	20	45	92
7	Butlers Rise #1	18	40	79
8	Cressy #1	8	16	29
9	Hummocky #1	8	16	30
10	Cressy #2	8	16	30
11	Hunterston #2	6	12	23
12	Macquarie #1	5	12	24
13	Stockwell #1	4	11	25
14	Scotts #1	4	8	15
15	Lonnavele #2	3	7	16
16	Steppes #1	3	7	16
17	Quamby #1	2	5	10
<b>Totals</b>		<b>594</b>	<b>1,290</b>	<b>2,598</b>

\*Monte Carlo calculations are based on Table 1 and 5 values.

mmbbl's = million US barrels (or BOE)

June 2008 (prepared by Tony Collings)



## On and Offshore Oil/Gas Production in Australia

GSLM Internal Report – Compiled by Tony Collings, October 2007.

### Onshore - Cooper/Eromanga Basin

The Cooper/Eromanga Basin covers an area of approximately 75,000 km<sup>2</sup>, and is currently the largest producing oil and gas field within onshore Australia (figure 1). Current annual production is approximately 20 Bcf of gas and 1.6 million barrels of oil. The Cooper/Eromanga Basin is estimated to contain approximately 3,720 Bcf of gas and 700 million barrels of oil (3P Santos, 2007).

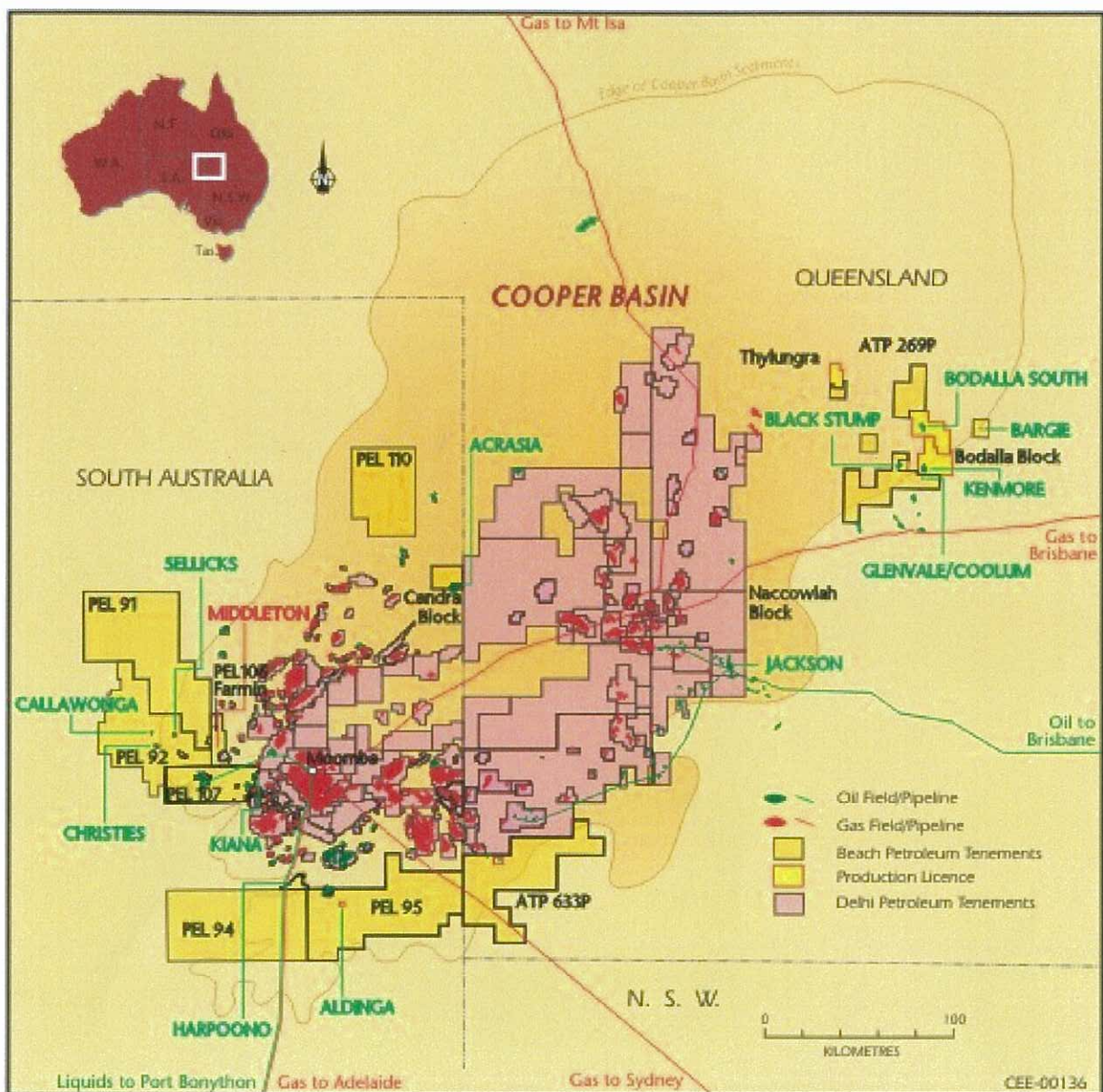


Figure 1. Cooper Basin Map (Beach Petroleum, 2007).

The Cooper basin of N/E South Australia, S/W Queensland was originally explored for oil and gas by the geologist Dr Reg Sprigg. Several surveys of the area were conducted and Dr Sprigg was awarded leases in the late 1950's and 1960's. The first commercial gas discovery was made at the Gidgealpa field in 1963. With the first Permian (Cooper) oil discovery made at the Tirrawarra field in 1970, and the first Jurassic (Eromanga) oil discovery made at the Strzelecki field in 1978.

Oil production from the Jackson field commenced in 1981, and the Jackson-Moonie pipeline opened in 1984. To date, approximately 340 oil wells have been drilled in the Cooper Basin and just over 100 million barrels of oil have been removed. In addition: over 1400 gas exploration wells have been drilled, with 630 of these wells currently in production.

### Offshore - Bass Strait

Currently there are 4 offshore oil and gas production basins within the S/E Australian Bass Strait region (figure 2). These are the Gippsland, Otway, Bass and Sorell Basins. The Gippsland and Otway Basins are the most productive, with over 70% of the total Australian offshore production coming from Gippsland (Calver, 1998).

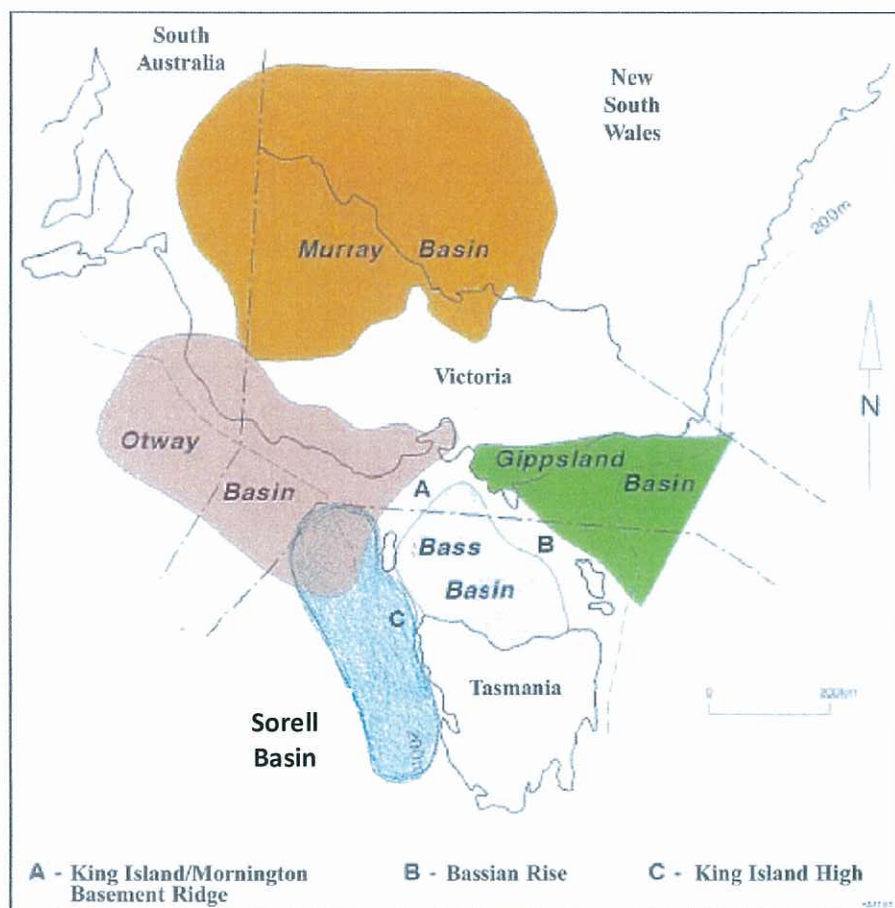


Figure 2. Offshore Basin Map (Victorian Government).